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WOMEN IN MEDICINE

Loree Florence, M.D.
Athens

Before the middle of the nineteenth century the medical schools of the United States were scarcely more than a name. Their courses of instruction consisted of two or three short terms during which lectures were given to students in anatomy, surgery, materia medica, and chemistry. Laboratories were very small or non-existent, dissections depended to a large degree upon grave-robbing, and hospitals offered little if any surgical work. There had been at least four men who taught obstetrics in the Colonies: James Lloyd, in Boston (1728-1810), Dr. William Hunter of Providence, R. I. (1729-77), a cousin of the famous Hunters of London; William Shippen (1736-1808), and Charles D. Meigs (1792-1869), both of Philadelphia, and teachers in its medical schools. These so-called men-midwives insisted that nothing but prudery prevented women from employing men at the time of their confinements, but they agreed that if women persisted in this false modesty they should be able to employ well-educated women midwives to attend them in labor. Whether Hunter or Meigs thought that women could possibly learn to use obstetric forceps and the correct methods of performing version is not recorded.

There was, however, a school for women midwives in Boston as early as 1846. Its courses were short and its students many. In 1848, and again in 1854 and 1856, Dr. Samuel Gregory wrote a pamphlet urging longer courses and better instruction for the students. In this he was ably seconded by such learned women as Mrs. Sigourney, Mrs. Emma Willard and the early suffragists, when the so-called medical college was receiving a regular stipend from the government of Massachusetts. Gregory cited the success of Mme. Lachapelle and Mme. Boivin of Paris in saving the lives of mothers and babies by their skill, so that the mortality among the patients confined in Paris was much less than that in Boston. He won his point, but he had no intention of giving midwives a regular education such as was given even in the poorest medical school of the time.

Public opinion is slow to change from the traditions of ages when women silently allowed themselves to be obscured and called blue stockings if they took any active part in the intellectual life of their communities. It appears, however, that these individual medical pioneers or midwives were in reality general practitioners, entirely human women and mothers who, being somewhat above the average in mental equipment, and willing to learn the necessary technical skill for their work, were compelled by pity for suffering to protest against the injustice of man-made laws and opinions which, because of the apathy of mothers and sisters and wives, had allowed men to become the arbiters as to the professional education of girls.

Waite tells us that there were admittedly few, if any, good medical schools in America, in 1847, when Elizabeth Blackwell applied at a dozen of them in different university centers for admission to the lectures. Men studied with old practitioners for three years and then went to a medical school for two terms to acquire a superficial knowledge of the science and art of surgery, materia medica, and therapeutics. Those who were observing learned something useful as to diagnosis of disease, but the theories as to the causes of disease, and the treatment by the medicines of the "regu-

lars" containing enormous doses of opiates and mercurials, and whiskey was only paralleled by the infinitesimal dose of the homeopaths and their rules for prescribing by similars.

Obstetric work, even in the middle of the nineteenth century, was mainly in the hands of sympathetic midwives who had learned their art from other women or from books like Spratt's Midwifery, an American edition of which was published in Philadelphia in 1848.

Although there were proprietary medical schools in this country like that of the midwives in Boston, eager to open their doors to women, the elderly practitioners with whom these women had studied advised their pupils to apply for admission only to those of repute in the regular medical societies.

It is interesting to see that the pioneer medical women had no intention of segregating themselves from men students, but when they found door after door closed to them, and scanty hospital work at the best, they were literally forced to open schools expressly for women where the subjects should be thoroughly taught, and hospital cases or clinical work available for study. Fortunately, noble and able men were found in New York and Philadelphia willing to put aside their own selfish interests in order to be of service to the cause of medical women, and after several years women were sufficiently trained at home and abroad to fill some of the teaching positions in these early colleges.

The Blackwell family came to this country from Bristol, England, in 1832. Their father was a sugar refiner who sought a fortune in Ohio by raising sugar beets. He was, however, unsuccessful in business and died in Cincinnati in 1838, leaving his wife and daughters to educate the younger children. Money came in very slowly from their little neighborhood school, and the restless spirit of Elizabeth, prompted by the sufferings of a friend who was dying of cancer of the uterus, led her across the Kentucky border to teach school, and there she began to study medicine with an old practitioner. Later she accepted a position as teacher in Charleston, S. C., at a fashionable boarding school and continued her medical studies with Dr. Samuel H. Dickson (1798-1872) of that city.

Professor Dickson assured Elizabeth Blackwell that no medical school in the country would open its doors to her, but nothing daunted her and she applied to twelve of the best in existence and happily was received at Hobart College in Geneva, N. Y., where she was graduated in 1849. Her brother's description of the ceremony is amusing. He says that she wore a black brocaded gown, "invisible green gloves," and black silk stockings. The dress must have been long and voluminous, well-fitted over the spreading hoop skirt and the inevitable bustle. He adds that all the ladies of Geneva turned out en masse to see a lady receive a medical diploma. The ceremony took place at 10 A. M., and the procession of graduates was headed by a band, the Bishop of New York; the Dean, Dr. Hale; the curators, the faculty, etc. Elizabeth refused to march with them lest it should not seem lady-like. The church galleries were crowded with ladies, but gentlemen sat in the aisles. Elizabeth was called up to receive her diploma after all the rest, and in a flattering speech she was addressed as Domina. The speaker said that she combined the strongest intellect and nerve and perseverance, together with the softest attributes of feminine delicacy and grace; certainly high praise from any man of the time. She bowed her thanks properly and on the impulse of the moment she turned again to the speaker saying, "Sir, I thank you; by the help of the Most High it shall be the effort of my life to shed honor upon your diploma." There was great applause and all the faculty smiled approvingly to one another, and the function was ended.

Elizabeth soon sailed for Europe where she studied for two years in England and France, much of the time at the Maternité, where she lost an eye from infection but gained a great deal of valuable experience. For many years her life was spent in work of medical pioneering both in America and in England, now helping to establish a hos-

pital and medical school for women in New York City, now lecturing to large audiences on physiology and hygiene there and in London, and helping her pupils and friends, Elizabeth Garrett and Sophia Jex Blake, to found a medical school for women in London, where she was registered as a physician in January, 1859, because of her American diploma.

Fortunately, Elizabeth Blackwell was attractive and had a sense of humor so that she could see the amusing episodes of her career, many of which were far from encouraging and were often great hindrances to her work. She made friends with influential people like Florence Nightingale, Lady Byron, John Stuart Mill, Herbert Spencer, George Eliot, Rosetti, Kingsley, Josephine Butler and Elizabeth Barrett, and all their families and acquaintances, so that she was able to influence legislation somewhat in favor of her schemes for the higher education of women not only in medicine but in philanthropy. Later, having returned to New York, she helped Dorothea Dix, and Dr. Mary Walker, and Amy Barton to organize nursing for the Northern armies in the Civil War. She had started a dispensary in the slums of New York soon after her return from Europe where, somewhat later, with her sister Emily, the foundations were laid for an infirmary and medical school for women, the charters for which were obtained in 1856 and 1865. The medical school trained many brilliant women until 1899, when it was incorporated with the medical school of Cornell University, and the infirmary is still an important hospital in New York greatly enlarged and ably "manned by women."

During the seventies and eighties Elizabeth Blackwell made her home and practiced medicine in England and in fact remained there and in Scotland most of the time until her death in 1910, but it was a busy life of practice, lectures, and writing books with at least a dozen titles. In 1874 by the help of Elizabeth Garrett Anderson and Sophia Jex Blake was founded the London School of Medicine for Women which, in 1877, was attached to the Royal Free Hospital and permitted to grant degrees such as were required for the British Registry. Surely this is a great record! Portraits of Elizabeth Blackwell and the other pioneers of Great Britain hang on the walls of the medical school in London, and a bronze memorial tablet also to Elizabeth Blackwell adorns the wall of the great hall at Syracuse University, which long ago took over the medical school of Geneva, New York.

The work of Emily Blackwell was not quite so spectacular as that of her sister, for it was spent mainly in medical and sociological work in New York in connection with the Woman's Medical College of the New York Infirmary. Emily had applied for admission to the medical school at Geneva and nine other schools but was refused for one reason or another. Finally, in 1852, she was admitted to Rush Medical School in Chicago, for one year. Then she was allowed (in 1853) to matriculate at the medical school of Western Reserve University where she was graduated in 1854. Then, like her sister, she went to Europe for further study in the great hospitals. When she returned, two years later, she brought letters of high praise from the most important obstetrician in Edinburgh. Sir James Y. Simpson, the first to use chloroform in confinements, and from other noted teachers. She found her sister Elizabeth already doing an important work at the dispensary in the slums of New York, helped by the Polish Marie Zakrzewska, whose diploma bore a recent date, 1856.

The New York school graduated its first class of five women in 1870, and from its beginning Emily Blackwell was dean and professor until its end, in 1899, when it was incorporated with the medical school of Cornell University. She was ably helped by Mary Putnam Jacobi, Elizabeth Cushier, Sarah McNutt and others whose training had been rounded out in Europe and whose ideals were of the highest. It is safe to say that not even in Zurich or Dublin or Paris or Edinburgh was the training of medical students in the seventies and later better than in these two schools for women founded by the Blackwells in London and New York. A bronze tablet to Emily Black-

well has been placed at the entrance of the infirmary where she worked so long and faithfully, helped by a few noble men of the profession. Certainly no students ever had better friends than Willard Parker, Valentine Mott, John Watson, Isaac E. Taylor and Abraham Jacobi of New York. If these young women could have been encouraged by the popular gynecologic surgeon, Marion Sims, and admitted to the Woman's Hospital in New York, as had been promised, their progress would have been smoother and far easier than it actually was, but this noted Southerner was not so generous as other men and far less liberal to women than many of the greatest leaders of his time.

The life and work of Ann Preston of Philadelphia has been the subject of many a lecture as well as of printed story. Her portrait in the hall of the Woman's Medical College of Pennsylvania shows us a meek little woman whose narrow head is quite different from the broad and massive head of Elizabeth Blackwell. She, too, in the forties felt the urge to study medicine and to open the doors of some medical college to women. There were four medical schools in Philadelphia at that time and two of them at least boasted a faculty of seven, but not one of them would entertain for a moment the idea of admitting her, although a few years later a somewhat eclectic school called the Penn College did admit several women who got their start within its walls. Ann Preston (1813-72), for some reason, was not satisfied with the Penn School and, therefore, with a spirit of quiet determination characteristic of the Friends, she looked around for able and broadminded men who might form a liberal college to which she and other women might be admitted. Such men were Dr. Bartholomew Fussell and Dr. Joseph S. Longshore and four other physicians, who, with a sum of money donated by the first president, Wm. J. Mullen, for a few classrooms, in October, 1850, opened a medical school for women in Arch Street to which forty were admitted; eight of them were graduated in 1852 and at once started out to practice—very much against the Quaker ideas of propriety, although the Quakers were the most progressive people of the city.

This move on the part of Dr. Fussell and Dr. Longshore cost them most of their paying practice, and their anti-slavery tactics cost them many others. Nevertheless, the fee for helping a slave girl in the underground railway gave Dr. Fussell money for a manikin, and thus in one way or another the school was equipped. During the fifties the school held its own, and though the teachers and students as late as 1859 were generally ostracized and excommunicated by the profession as if it were "sectarian," it gave two good courses of instruction, and was quite the equal of the men's medical schools in Philadelphia. With the exception of a few months during the Civil War the college has never closed its doors nor fallen behind the others in its teaching and practical work; in fact, it has often antedated the older colleges in increasing its courses and requirements for graduation.

In 1856, by the time that Ann Preston was prepared for a teaching position she was asked to be professor of physiology—though without a laboratory — and then dean. She held both posts and organized a laboratory the equal of those in other schools, and she also founded the Woman's Hospital before her death in 1872. Early in the sixties, during the Civil War, she led the students by invitation to Blockley Hospital to walk the wards or listen to lectures, although sometimes they were the objects of jeers and missles hurled by the men students. By 1856 the college had matriculated one hundred and fifteen students, despite the fact that Elizabeth Blackwell, in New York, was having a sorry time to establish herself in practice, since the men of the profession, as a rule, refused to meet her or any other medical women in consultation. Hannah Longshore, of the class of 1852, on the contrary, quickly had a busy practice in Philadelphia in spite of some discourtesies. She taught physiology to large classes of girls, drove an imposing equipage, and was quite au fait with the society folk.

Notwithstanding the fact that its professors had been members of the Philadel-

phia County Medical Society, the Woman's Medical College was considered "off color," "irregular," Thomsonian, Hahnemanian, or what not? No amount of denial of these slurs or many urgent invitations to investigate the college work changed the attitude of the members of the medical society towards the teachers and the graduates of the school for nearly twenty years, but in the meantime we find the graduates holding honorable positions all over the country, opening dispensaries, founding hospitals, and by 1870 teaching in medical schools for women in Boston, New York, Chicago, and San Francisco. They were among the first to take positions on boards of health, to become superintendents in hospitals for the insane, to organize medical charities, and to establish sanitariums where women's ailments were not treated carelessly by bromides and opiates, but where nurses were trained to care for the sick, and gynecologic disease was properly diagnosed because its cause had been carefully investigated, not by men untrained in gynecologic diagnosis, but by women to whom painstaking vaginal examinations were insisted upon by their teachers.

Among the early graduates of the Female Medical School in Philadelphia were several women who became teachers at their Alma Mater. There was Emmeline Cleveland, M.D., '55, a graduate of Oberlin in '53, the wife of an invalid clergyman, already a mother, when she was sent to Paris by admiring friends for graduate study in order to become professor of obstetrics and surgery at the college. She returned with several prizes, taught obstetrics and surgery at the college, and was resident physician at the new hospital which Ann Preston had built. She was a brilliant surgeon, the first ovariotomist in the city, an expert obstetrician, but she died in her prime in 1878 at the age of forty-nine, and was buried beside her friend, Ann Preston, who had died six years earlier.

Humble though the Woman's Medical College was in the sixties and seventies we find Rachel Bodley teaching chemistry there in 1865, a woman universally recognized in scientific circles for her ability. Anna E. Broomall, a remarkable obstetrician and surgeon, who taught the pupils to connect their hands and brain in obstetric work, was on the staff in 1871. Hannah T. Croasdale, M.D., '70, was soon appointed professor of gynecology and though a monotonous lecturer she was a noted surgeon and vied with Thomas A. Emmet in performing both plastic and major operations at the new hospital. Frances Emily White, '72, soon became one of the best lecturers and teachers of physiology in the country, and won the admiration of Mary Putnam after she returned from Paris in 1871 with her diploma from the l'Ecole de Médecine. Dr. White was continually before the public in controversies as to the material basis of life; she was a delegate to the International Congress in Berlin as early as 1890, and in every respect she compared favorably with the greatest thinkers and teachers of the time.

Although not exactly a pioneer woman doctor, we should mention the work of Clara Marshall, M.D., '75, in this connection, because to her skill and tact many of the greatest improvements in the college were due. Under her and Rachel Bodley, as deans, the college outgrew its old quarters, and opened a new building with lecture halls and laboratories, and a larger hospital as well as a clinic building with an operating theater. She was appointed the first woman lecturer on the staff of Blockley Hospital (1882), and because of her talents as a writer and impromptu lecturer she did a great deal to advertise the college and keep it before the public. She retired as dean in 1917 after forty years of service and died in 1931, soon after the college moved into its new and commodious quarters at East Falls, Philadelphia.

Thus we see that since 1859, when the Philadelphia County Medical Society excommunicated by fiat every member of the teaching staff, and the doors of nearly every hospital were closed to its students, many and important improvements kept the college constantly in the first ranks of medical schools in the United States. In 1881 the three years' course was made obligatory

and twelve years later it was one of the first to institute a four-year course. In 1888 Dr. Broomall opened the out-patient department for obstetric material and made every student responsible for six maternity cases and their pre-natal work. This was a great innovation, the product of Dr. Broomall's brain. After her return from a tour around the world for study as well as for inspection of the obstetric work of the graduates of the schools in Europe, Asia and Africa, in 1903, she opened a small maternity hospital in connection with the school. In 1904, however, she resigned despite protests from alumnae all over the globe. She died in 1931 at the age of 84 years. The college has now graduated more than sixteen hundred pupils, of whom one hundred and twenty-five have gone as medical missionaries to foreign lands and most of the rest have done home missionary work in connection with their private practice.

Quoting from *Blockley Days*, 1883-84, by Arthur Ames Bliss, we find that there were eleven men and one woman on the resident staff of Blockley at that time. They had won their positions by competitive examinations. The one woman was Dr. Pauline Root, from the Woman's Medical College of Pennsylvania. They lived in the almshouse and gave the woman doctor the room at the end of the hall, for greater privacy. The beds of the maternity were always full, and among the patients were many cases of puerperal fever, the mothers mainly were unmarried.

Turning again from New York and Philadelphia to Boston in the fifties, we find that the school for midwives, so earnestly supported by Dr. Gregory, never became a regular medical college, although it had permission from the Massachusetts legislature to grant the degree of M.D. to its graduates. In order to raise its standard, however, Marie Zakrzewska, (1829-1902) a Polish woman of noble birth who received her medical diploma from the Western Reserve University in 1856, was asked in 1859 to become professor of obstetrics and to put the school on a better foundation than before. She had come to this country in 1853, an expert midwife twenty-four years old, having previously been appointed head of the school of midwifery at the great maternity hospital in Berlin. Unfortunately, she found New York cold to midwives because of the nefarious activities of a notorious abortionist named Mme. Restell. Fortunately, however, she became acquainted in May, 1854, with Elizabeth Blackwell, Emily being in Europe, and was glad to associate herself with the work of the New York Infirmary, then in its second year. Dr. Blackwell urged Marie to go to the Western Reserve Medical School in Cleveland, where Emily had recently been graduated, for she felt that as a basis for good obstetric work it was necessary to have a background of general medicine as well as of culture and special training. In one way and another money was found for the college course, and, with but a smattering of English, Marie entered the medical school of Western Reserve in 1854, graduating in '56 with honor. In 1859, after helping the Blackwells establish their hospital, and also aiding Ann Preston to start the Woman's Hospital in Philadelphia, Dr. Zakrzewska was persuaded by Dr. Gregory to accept the chair of obstetrics at the Boston school. She was, however, unable to bring the curriculum up to her standards and, therefore, resigned in 1862 to devote herself to private practice and the organization of a hospital for women and children.

Dr. Zakrzewska's hospital, opened in 1862, was successful from the start. The "best men" of Boston were willing to belong to the staff, and there were several well-trained medical women ready to do the arduous work of clinics, among them the twin sisters, Emily and Augusta Pope, fresh from the Boston school and two years study in Europe; Lucy Sewall of Boston and Zurich, and Anita Tyng of Newburyport, a graduate of the Philadelphia school.

It would be interesting to continue the story of the work in Boston, and to give in detail biographies of the pioneers who established the New England Hospital and worked unceasingly to prove that there is no sex element in medicine. Always conscientious, medical women were well aware that they were under the critical eye of

contemporary men and, therefore, must excel in whatever they undertook.

Mary Corinna Putnam's writings have been collected and published in two volumes, and many an article has contained eulogies of this woman doctor whom Sir William Osler called a "bright particular star in the firmament."

Mary Putnam belonged to a well-known New York family of publishers. Though born in England, in 1842, she was brought up in America and studied pharmacy in New York, and medicine at the Philadelphia school, where she was graduated in 1864. Even then she was not satisfied that she knew enough to open an office, and being somewhat of a writer she decided to go to Paris for further study and to support herself by corresponding with various newspapers and magazines. The story of her relations with the authorities at the Sorbonne and l'Ecole de Médecine, and her descriptions of the siege of Paris are most interesting and graphic. Owing to the war she was delayed in receiving her diploma until 1871, the year following the date of Elizabeth Garrett's diploma. Soon after she had returned to New York she was admitted to the Demilt and Mt. Sinai dispensaries, then to the New York Academy of Medicine. As the wife of Abraham Jacobi, whom she married in 1873, she and Dr. Sarah McNutt, together with several able men physicians, founded the New York Post-Graduate Medical School and Hospital where women doctors were always welcome, and where lectures by capable women were as acceptable as those by men. Dr. Mary Putnam Jacobi usually lectured standing in a dignified manner whereas the men sometimes perched themselves on a corner of a table to address the audience. Dr. Jacobi was generally dressed in black and her voice was soft and clear, quite different from the manly voices and rather bumptious demeanor of the men. Whom was the more interesting lecturer depended upon the point of view of the hearers. Dr. Jacobi was always thoroughly versed in her subject, and her statistics and descriptions and historic data as well as her diagnoses and treatments were remarkably practical, accurate, and up-to-date.

The life of Mary Putnam Jacobi, published and edited by her niece, Ruth Putnam, in 1925, fills a large volume and vividly shows the importance of her work, not only for her own reputation as a practitioner, lecturer and writer, but for the furthering of medical education among women. She was a great believer in organization, an enthusiastic member of hospital boards and lay associations, a good speaker and regular attendant at medical meetings, and a noble friend of all medical women who seemed to be worthy of her respect and affection. From the time, in 1876, when she won the Boylston prize in a Harvard competition, by her essay on *The Question of Rest for Women During Menstruation*, until her death in 1906 at the age of sixty-four years, she wrote continuously and well on all important medical topics. There was scarcely a paper read at a medical meeting when she was present to the discussion of which she did not add something of importance. It was an inspiration to be with her at any gathering. She was always eager to see medical women forge ahead, and she urged them not to keep silent in meeting. She sought and found the best that was in her colleagues, but she wanted the world to know them too in proof of the fact that their education had been worth while, and that if women did not give something from their own brains they could not acquire much from the brains of others, in other words that self-education was the only true education. In writing of the work of her contemporaries Dr. Jacobi refers to the shortness of time during which women have been permitted to study medicine in colleges and universities, and she closes her article on women in medicine with these words: "When a century shall have elapsed after general intellectual education has become diffused among women; after two or three generations have had increased opportunities for inheritance of trained intellectual aptitudes; after the work of establishing in the face of resolute opposition the right to privileged work in addition to the drud-

geries imposed by necessity; after selfish monopolies shall have broken down . . . when all these changes shall have been effected for about a hundred years, it will then be possible to perceive results from the admission of women to the medical profession, at least as widespread as those now obviously due to their admission to the profession of teaching."

To Mary Putnam Jacobi the admission of women to the medical school of Johns Hopkins University through the gift of Miss Mary Garrett, in 1890, meant the end of a narrow colonial period and the beginning of a life in the great wide world of science, side by side with men, each taking the part that seems fitting but neither looking down on the other. She little realized that her own step into the halls of the University of Paris in 1876 and her exit with her diploma from l'Ecole de Médecine in 1871, after the Franco-Prussian war, meant as long a step forward as that of Elizabeth Blackwell in 1849, and that such strides are necessarily rare.

The second woman, in point of time, to be graduated from an American medical college, or from any medical college in the nineteenth century, was Lydia Folger-Fowler of Nantucket, (1822-79). She had been brought up on that little island off the coast of Massachusetts where most of the medical practice had been in the hands of midwives and phrenologists or self-taught men. Evidently the rugged climate and the remoteness of the island in times of storm had made of this island a paradise for the use of grandmother's herbs and a refuge for sectarianism of all kinds. We can easily imagine the bunches of dried roots and plants hanging from the rafters in the attics, and visualize the apothecary shops where large boluses of pill-mass were cut up and rolled into bullet-shaped pieces and covered with dusting powder to be carried in the saddle bags of the doctors whose long white beards gave them a truly patriarchal appearance.

Lydia Folger had married a Nantucket phrenologist named Fowler. Phrenology was very popular in those days and a not unlucrative profession. Lydia seems to have published three books for young people on phrenology and physiology and astronomy, and to have lectured rather extensively before attempting to take a regular medical course in 1849 when the only medical school open to women was the new eclectic school in Syracuse and then Rochester, N. Y., where she was graduated in June, 1850, four months before the opening of the Philadelphia school for women. In 1851 she was appointed professor of midwifery and diseases of women and children at her Alma Mater, the first medical woman in the world to have such an appointment in the nineteenth century. Later, after the Rochester school had been moved back to Syracuse, she lectured to classes of women at the Metropolitan Medical College in New York where she had settled in practice. This was a sort of physiotherapeutic institute, and as such it was popular in many circles. She published other books before going to Europe to study and give lecture courses in physiology, temperance, etc., and she spent several years traveling, going even so far as Egypt and Palestine. She died in London in 1879, at the age of fifty-six. Dr. Waite adds that "her ability, industry, and personal charm won for her wide recognition in England. Good inheritance, innate intellectual capability, abundant industry, and somewhat unusual opportunity combined to make a career that measures up to the best traditions of American medical women." We, therefore, must recognize the broadmindedness and industry of Lydia Folger Fowler, and admit that the second pioneer woman to obtain a medical degree in the nineteenth century was worthy of the honor.

The third woman in the United States to receive a diploma from a medical school was Sarah Adamson-Dolley (1829-1909). When Sarah Adamson was ready for "non-sectarian" practice she returned to Rochester, N. Y., married Dr. Lester Dolley, and with him practiced for fifty years, always keeping up with the times, and caring for a large clientele. In 1886 she organized a free dispensary for women and children, founded the Blackwell Medical Society, in 1887, the first association of medical

women, and in 1907 was elected a life member of the Rochester Academy of Science. She died in 1909, at the age of eighty years, deeply mourned throughout the country.

The fourth medical pioneer appears to have been Rachel Brooks-Gleason, 1820-1905, who was also graduated at Rochester in 1851, a few months after Dr. Dolley. Her husband, Silas Orsemus Gleason, was a graduate of the medical school at Castleton, Vt., where, once upon a time, a few women were allowed to listen to medical lectures from behind a screen, though they did not receive diplomas. The Gleasons practiced together for many years in Elmira, N. Y., and conducted a sanitarium, the successor of which is still "doing business" in the best medical sense of the word.

The story of the Homeopathic schools begins with the graduation of Dr. Helen Cook, whose diploma was dated 1852 from the new sectarian school in Cleveland. Her graduation scarcely antedated that of the first medical class of 1852 at the new school for women in Philadelphia where Ann Preston and Hannah Longshore of Philadelphia, and Martha A. Sawin of Boston, were among the graduates in January of that year. It is, therefore, impossible to say which was the fifth woman to graduate in medicine in the United States, but Helen Cook must have been the first in homeopathy, and among her immediate successors were Myra K. Merrick, '52, and Clemence Sophia Lozier, '53.

Of Dr. Lozier, 1813-88, we must say more than a word, because she represented the fashionable world of New York in the sixties and was very popular as a surgeon and obstetrician. She founded a hemeopathic school for women and a hospital which received students and patients in 1863. She probably studied homeopathy at Cleveland, but she had spent a year at the Rochester eclectic school and received her degree at Syracuse in 1853.

She lived as a child in Plainfield, N. J., and at the age of sixteen married Abraham Witton Lozier, an architect, who did not live long after their marriage. It was because of her interest in the poor and in social work that she decided to study medicine in order to be of more use in the world. After settling in practice in New York she opened her house to pupils and in 1863 founded the homeopathic medical school which later became the New York Medical School and Hospital for Women of which she was dean for twenty years.

Although we have been confining ourselves to the earliest medical schools open to women in the fifties we find that the appreciation of women as physicians was steadily spreading and they were becoming necessary to the communities in which they had settled. During the Civil War, Elizabeth Blackwell and Mary Walker were among the first to offer their services to the Army and were gladly accepted for the organization of nursing. Help came to them from all over the country wherever medical women were found. After the war the question of providing medical aid for the soldiers and for the negroes was all absorbing; more doctors were needed, and by the end of the sixties two state universities, California and Michigan, opened their doors for co-education. We find that in 1867 Dr. Ruth Gerry went from the New England Hospital to Ypsilanti, Mich., to work for the opening of the medical school at Ann Arbor to women. This was accomplished in 1869, and Amanda Sanford, a graduate of the Philadelphia school and the New England Hospital, where she had been an intern, was graduated with honor after a few months' study in the first class. She practiced with success for many years in Auburn, N. Y., where her ability, dignity, and charm of manner soon won for her a large clientele among the townspeople. She was acknowledged by her men colleagues to be one of the ablest practitioners in the whole country. She was soon chosen president of the County Medical Society and was active in establishing a flourishing hospital in Auburn.

Another Boston woman also went from the New England Hospital to the medical school at the University of Michigan and graduated in 1873 with the highest honors. This was Emma L. Call, one of Dr. Zakrzewska's students, a woman of the high-

est ideals for herself and for the "cause." She was at the head of the class of the ninety-six members among whom were twelve women. She then studied in Europe and was the first woman to be admitted by examination to the Massachusetts Medical Society, in 1884. For many years she was not only one of the leading practitioners of Boston but one of the most dependable instructors of interns and nurses to be found in the country, a devoted friend to all who needed help of any kind, medical or spiritual, and a fine type of woman doctor. Dr. Call is still living in Cambridge, Mass.

In the class with Dr. Call was Sarah A. Gertrude Banks who, after graduation, organized the Woman's Hospital and Foundling Institute in Detroit. Two years later, in 1875, another noted woman graduated at Ann Arbor. This was Dr. Eliza M. Mosher, who became the university's first dean of women. She was on the staff of the college for a time and then was asked to establish the hospital for the women's Reformatory of Massachusetts. Later still she was resident physician at Vassar College and in her old age she was the choice of the mayor of Brooklyn to organize the hygienic "clean up" of the city where she had been for many years in practice. This was done to the immense satisfaction of everybody. Dr. Mosher died Oct. 16, 1928, and was widely mourned.

Thus we have found that after these women pioneers studied medicine they seemed to find themselves necessary in many spheres of medical work for the general public as well as for their own private patients. Gradually the irregular schools were absorbed or allowed to die of inanition while most of the state universities followed the lead of Michigan, California and Kentucky, and adopted coeducation in medicine as well as in art. Finally the schools for women alone, with the exception of the Woman's Medical College of Pennsylvania, closed their doors because their work was done.

Whereas, in 1850, there were few specialists among men doctors, so rapidly had medical education progressed that now, some three generations later, there is scarcely a medical specialty not represented by women, and further, there is scarcely an association of men specialists to which women have not been invited to become members. If we glance at an article by Dr. Anna E. Blount, in the Woman's Number of Medical Review of Reviews (March, 1931), we note how successful women have become in the medical profession, especially if one counts success by income and collections. She found that in the states most populated, like New York, Illinois, and California, women doctors had an average income of $5.000, while 8 per cent of them reached $10.000. This, from one point of view, shows that women doctors are needed and appreciated.

Because of the early struggles of the pioneer medical women for admission to men's colleges, hospitals and societies, it must have seemed to the leaders that once these objects had been obtained, recognition would then have come more rapidly to their successors according to their merit. This was true in private practice and in gaining positions as medical directors at academic colleges for women, and in appointments to minor offices where the work was hard and not so attractive to men. In fact, rather early it was conceded that women might have positions in charge of women in prisons and almshouses, but these positions did not satisfy women who had graduated with men at some of the best co-educational colleges nor, in fact, those who graduated at women's colleges where the teaching and clinical work were equal to that in the schools for men.

It is a matter of history that even in 1848 Elizabeth Blackwell had been allowed to study in the wards at Blockley. Dr. Dolley was intern in 1851, and in 1852 Dr. Clara Marshall was appointed to the visiting staff, and soon thereafter Dr. Hannah Croasdale was also given this honor; and in 1883 Dr. Pauline Root was resident physician.

In 1880 Dr. Alice Bennett, from the Philadelphia school, was asked to care for the women at the Pennsylvania State Asylum for the Insane. She went to Norristown as "an experiment," liberated the

patients from chains and cells, and was so successful that within the following decade many other states of the Union followed the lead of the Quaker state in this respect. In 1891 Dr. Bennett had 800 patients under her care. In 1881 Illinois appointed Dr. Sarah Hackett Stevenson to take charge of the women in the Cook County Hospital. In 1905 Dr. Mary O'Malley was placed over the psychopathic wards at St. Elizabeth's Hospital, Washington, D. C., as resident physician, and in 1917 as clinical director. Thus the work, so full of responsibility, increased slowly but surely because it was a reasonable arrangement, a tested experiment, and eminently fitting that since women had been trained as well as men they should receive positions of equal importance.

Before turning to the question of medical women as teachers in medical schools we should not neglect a reference to the kindness of men physicians of prominence in all the cities where there were colleges for women. In 1870 some of the best surgeons in Chicago helped Mary Harris Thompson (1829-95), to found the Women's Medical School of Chicago, where she had, with many handicaps, opened a hospital for women and children in 1865. Chicago was then a relatively small city, and the great fire of 1871 swept away her little hospital, but with tremendous energy, she at once opened a barracks for the burned and wounded, the whole personnel of the Relief and Aid Society backing her with $25,000 on condition that twenty-five patients should be cared for constantly. Dr. Thompson was a graduate of the Female College of Philadelphia after having studied in 1859 with Dr. Zakrzewska in Boston, and later serving a year as intern with Dr. Emily Blackwell in New York. Dr. Zakrzewska was proud of the ability and courage of her pupil and she says: "Dr. Thompson was the first woman surgeon who performed capital operations entirely on her own responsibility." One of her biographers, Dr. Alfreda B. Withington, says, "for thirty years she labored there (in the Mary H. Thompson Hospital) doing all the surgical work with wonderful precision and dexterity of manipulation." She had many noted followers in her surgical work, as we shall soon see.

Hospitals like that of Mary H. Thompson, and the other pioneer institutions, managed by and for women impressed the public with the ability of educated women to make and carry out plans for human welfare as well as men could do, for, in fact, to manage an institution requires the same kind of mind as that of a successful wife and mother in a home, plus some business methods and an understanding of the details of budgeting and of mass psychology on a large scale. Such a mind was that of many of our pioneers, notably those previously mentioned and others like Sarah Stockton, who for twenty-one years was superintendent at the State Insane Asylum at Indianapolis, Eliza Mosher at the Woman's Reformatory at Framingham, and Louise Morrow at the Illinois State School for Girls.

The medical graduates from the early colleges for women seem to have been of specially fine fiber and full of energy. Elizabeth Blackwell raised the teaching of hygiene to a plane on a level with that of obstetrics and surgery. She was followed by such women as Elizabeth Thelberg of Vassar College, and Lillian Welsh of Goucher.

Emily Blackwell opened the way for better teaching of gynecology and of surgery, and was ably followed by Elizabeth Cushier and Hannah Croasdale.

Marie Zakrzewska upheld the science and art of obstetrics more conscientiously than any medical teacher of men. She was a forerunner of such eminent women as Emmeline Cleveland and Anna Broomall and Bertha VanHoosen and Rachel Yarros.

Mary Putnam Jacobi and Frances Emily White were examples of the art of making students do their own thinking as well as masters of accuracy in all branches of medicine.

In 1882 Mary Putnam Jacobi and Sarah McNutt were appointed lecturers at the Post-Graduate Hospital in New York City. Ten years later Dr. Rosalie Slaughter Morton became assistant professor of gyne-

cology with four helpers. In 1912 women were given salaried positions as lecturers at Bellevue and at New York University. Whereas in 1900 there were in this country only two medical women teaching medicine to classes of men and women—Dr. Eliza Mosher in the department of hygiene at the University of Michigan and Rachel Yarros, chief in that of obstetrics at the College of Physicians and Surgeons in Chicago—by 1930 there were thirty medical women holding similar positions in the United States. There were at that time about 8,000 women and 154,830 men doctors listed in the directory of the American Medical Association, all supposed to be in active practice.

Among the well-known teachers in medical schools, whether co-educational or for women only, since the days of the pioneers, we find Elizabeth Bass at Tulane, professor of pathology at the graduate school, Rachel Yarros and Bertha Van Hoosen and Alice Hamilton and Florence Sabin and Elizabeth Hurdon and Esther Loring Richards, and Martha M. Eliot, all teaching men as well as women.

Not only as teachers do we find women filling the highest positions in the gift of medical institutions but as model laboratory investigators, among whom, taken at random, should be mentioned Gladys Dick, Louise Pearce, Florence Sabin, Leda J. Stacy, Martha Wollstein, Georgine Luden, Maude E. S. Abbott, and others who are investigating epidemic diseases, anatomic questions, cancer problems, and other exceedingly important subjects with the care and skill of the most able men.

All medical women in active practice are now expected to belong to the American Medical Association through their state societies, despite the fact that in certain cities the fees are rather prohibitive because of the expense of their buildings. Nevertheless, in nearly every state there are or have been medical women elected to the presidency or secretaryship of the local organization. Twenty-five women now belong to the old exclusive College of Physicians, thirty to the College of Ophthalmologists, and sixty-nine to the College of Surgeons. One, Dr. Catherine Macfarlane of the Woman's Medical College of Philadelphia was the first woman elected to the College of Physicians of Philadelphia, one hundred and fifty-five years after its founding, and eighty years after the founding of the Woman's Medical College. The only woman member of the American Gynecological Society is Dr. Lillian K. P. Farrar, of New York, and there are but two women, both professors at the Philadelphia school, Dr. Macfarlane and Dr. Margaret C. Sturgis, on the American Board of Obstetrics and Gynecology, where, obviously, many women should have a seat. Probably the omission of their names is due not to their personal unfitness but to their indifference to the honor, and yet it can not be doubted that their influence would be most beneficial in consideration of the ever-present topics of maternal mortality, birth control, and stillborn infants. When one compares the statistics of the obstetric records of the Woman's Medical College under Dr. Broomall, Dr. Alice W. Tallant and Dr. Lida S. Cogill and their graduates with those of the country at large, one must admit that the balance in favor of the women's statistics is certainly most significant.

Among the interesting occupations for women doctors is that filled by Dr. Maude E. S. Abbott, of Montreal, whom Sir William Osler called the "most perfect director of museums in the world." Not only is she an expert museum director at McGill University but also is a pathologist of great note. Her investigations in the minutiae of diseases of the heart have made her a recognized authority on that subject all over the world. In answer to the question as to what women doctors have done to prove that it is worth while to educate them Dr. Abbott says, "Although none of the women doctors of the nineteenth century has become so noted as Pasteur, or Koch, or Ehrlich, the sum of human knowledge is not achieved by the solving of a few problems. It is formed by the consensus of innumerable honest and precise observations, original investigations, and independent conclusions, such work as is being

done by many women in medical research today."

Recently, investigations of cancer have been prominently before the public, and in this work, whether in the laboratory or in surgery or in the use of radium, we find women as busy as men. Among the number is Dr. Leda J. Stacy of the Mayo Clinic, a radiologist and an expert diagnostician of uterine and mammary cancer; Dr. Edith Quimby in research work at the Memorial Hospital in New York; Dr. Zoe A. Johnston, a radiologist of Pittsburgh; Dr. Lillian P. K. Farrar, a radiologist as well as surgeon at the Woman's Hospital in New York; and Dr. Grace Line Homman, of Los Angeles, who, as Dr. Stacy says admiringly, "owns a sufficient quantity of radium for her large practice."

As for women surgeons there is much that might be said, a good deal that has been said in their favor, and considerable misunderstanding and underestimating as to the number and skill of women who have been practicing this specialty. Quoting from an editorial article by Bertha Van Hoosen in the Medical Woman's Journal (1930), we find no less a surgeon than Dr. Connie M. Guion of the Cornell Clinic regretting that so few women go into surgery since they are by nature endowed with hands and brains most fitting for operative work. She mentions Dr. Barbara B. Stimson, of the Hospital of the College of Physicians and Surgeons, as the "only surgeon who has so far emerged." To this Dr. Van Hoosen replies that there are more than sixty women surgeons who have emerged and belong to The American College of Surgeons, indicating that their surgical skill and experience have been acknowledged by that highest of tribunals. Dr. Van Hoosen also mentions Dr. Lillian K. P. Farrar, a member of the National Association of Gynecology and Obstetrics, attending surgeon of the Woman's Hospital, consulting surgeon to the Booth Memorial Hospital, assistant professor of obstetrics and gynecology in the Cornell University Medical School, a graduate of that college in 1900. Dr. Marie L. Chard was also cited as having done major surgery in New York City for more than thirty years.

The Medical Mentor (1930), has published an article by Dr. Agnes Vietor of Boston, herself a noted surgeon and medical author, on this subject. She tells us that the first woman appointee as surgeon at any hospital in Boston was Anita E. Tyng in 1865, assistant to Dr. Horatio R. Storer, and the second was Dr. Annette E. Buckel in 1875, who was given the full title of attending surgeon, both of them operating at the New England Hospital in Boston—Dr. Zakrzewska's hospital. By that time there were women surgeons at all the women's hospitals, Dr. Croasdale and Dr. Broomall in Philadelphia, Dr. Cushier in New York, and several others. each praised by such noted men surgeons as Marion Sims (1813-83), and Horatio Storer (1830-1922), and Thomas Addis Emmet (1828-1919), as equal in operative results and technic to any surgeon in the world.

We may not omit a few words in praise of Dr. Olga F. Stastny of Nebraska, who went overseas during the World War and worked in Czecho-Slovakia and Greece with the Red Cross, the Near East Relief, and the American women's hospitals. For many months she battled almost single-handed with the diseases brought by the refugees from Smyrna and Armenia to the barren island of Macronesi, off the coast of Greece. Ten thousand refugees there were to be deloused, cured of typhus or cremated, and treated for every known contagious disease, her helpers being in the main Armenian refugee doctors and Greek soldiers. Their food was chiefly bread and water from the mainland of Greece.

Not only have medical women gone from America and Europe and Australia to Asia and Africa to practice among the indigenous peoples, but several of the native women of China and Japan and India have studied medicine in America and returned to minister to their own compatriots.

Dr. Nina H. Maynard went from Barnes University in 1908 to Tanganyika, East Africa, and is still working there among the black people who seem to be surpris-

ingly responsive to modern ideas of cleanliness. In 1931 she reported for that one year a total of 1,308 confinement cases, which included fourteen pairs of twins. She is physician, surgeon, obstetrician, trainer of nurses and midwives, minister's wife, mother, and general factotum. The story of her work, with primitive and scanty materials and of operations in the great out-of-doors, is almost unbelievable in its variety and stress.

In 1915 medical women were as a rule members of the American Medical Association and in this year the Medical Women's National Association was founded with Dr. Bertha Van Hoosen as president. The services of this association were offered to the government in a letter to President Wilson. Subsequently, at a meeting of the Medical Women's National Association in New York, June 5-6, 1917, a war service committee was organized to give to medical women an opportunity in war service. Dr. Van Hoosen, president of the association, appointed as chairman of this committee Dr. Rosalie Slaughter Morton who had previously organized health work among the federated clubs of women under a mandate from the American Medical Association.

That we have found the names of so few women writers down the ages in comparison with men throws a flood of light on the psychology of both sexes. If we believe that history is the essence of innumerable biographies, we feel sorry that so few medical women have taken pains to record the stories of their lives, but it must be admitted that though they have kept silent their work has survived in deeds of kindness that have covered the earth and helped mankind to rise to heights they could not have attained without the unobtrusive help of sympathetic and trained women.

The art of writing, as Pope says, is not learned by chance, and therefore medical women, busy in their homes, with their children, their patients or laboratories have not rushed into print until forced to do so by some veritable urge. However, we can scarcely take up a medical journal in these days in which no woman has a share. Evidently, though in medical and surgical practice highly efficient, some women are as voiceless as those whom Oliver Wendell Holmes lamented:

> "Those who never sing,
> But die with all their music in them."

We find the hobbies of medical women, from gardening to golf and travel, from making collections of stamps and maps and books to bric-a-brac, there is nothing omitted in their substitutes for medical work whenever they take some form of relaxation. In this they appear to be more catholic than men, and in their vacations they literally circumnavigate the globe. Among these world travelers are Mary McKibbin-Harper, our only bearer of the silver torch for literary work, who has lectured from Chicago to Tokyo, and Esther Lovejoy who has organized hospitals in many of the countries to the south and east of the North Sea through Europe and Asia; and Anna Broomall and Bertha Van Hoosen and Anna Fullerton and Elizabeth Stevens who have gone to India or China or Japan to help the medical missionaries with their work.

In conclusion, let me add that I have tried to show that women doctors have justified the trust left to them by the pioneers. From every part of the country I have received biographic notes of beloved women physicians and locally famous surgeons, excellent teachers in medical schools and expert specialists in the various departments of medicine which invariably show that women who devote their brains as well as their hearts to the cause of sickness and suffering are as necessary to the well-being of the nations as are their more robust but not less self-sacrificing men colleagues. Perhaps, therefore, Longfellow was right in saying:

> Happy those whose written pages
> Perish with their lives.
> If among the crumbling ages
> Still their name survives.

REFERENCE

Medical Women of America by Kate Campbell Hurd Mead, M.D.

Tuberculosis in older persons reflects the presence of yesterday's epidemiology in today's society. J. T. Freeman, M.D. and C. A. Heiken, M.D. Amer. Jour. of Sciences, July, 1941.

SPARTA CHILD HEALTH DEMONSTRATION

A Review of the Organization, Plans Activities, and Accomplishments

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For a great many years I have been extremely interested in the problem of malnutrition in Georgia, as I am confident that it is the principal contributing factor in practically all of our public health, medical, economic, and social problems. At every opportunity I have stressed the importance of adequate nutrition as a public health measure.

Five years ago when the expansion of Georgia's public health program seemed eminent by the possibilities for increased funds from the Federal and State governments, I began talking nutrition in earnest to all those I came in contact with who were interested in and working for the betterment of conditions in this State. Fortunately, I was encouraged by the cooperation offered by those engaged in efforts to improve the living conditions of people in the rural sections of Georgia.

By interviewing the leaders in agriculture, education, University Extension Service, and research work, I found that they were all interested in joining public health workers in a combined effort to demonstrate the effectiveness of an adequate program in Georgia for improving the health, welfare, and educational status of people in a rural area with groups in special need.

Consequently, on May 13, 1936, I called a conference in my office for the purpose of considering plans for measuring the results of a five-year nutritional program supported by the combined efforts of all agencies interested in rural progress. At this meeting the approach to the problem and the contributions to be made by each cooperating agency were discussed. The conference resulted in a crystallization of the ideas of each group represented into a preliminary working plan.

Read before the Sixth District Medical Society meeting, Sparta, July 26, 1941.

Plans

Plans for the establishment of a Child Health Demonstration in Hancock and Glascock counties, utilizing Social Security Funds, were completed and approved by the Children's Bureau, the purpose of which demonstration was to provide a well-rounded public health program with distinct emphasis on child health and nutrition. An important feature of this program was the service to be rendered by cooperating agencies. Headquarters for the demonstration were established in Sparta, with a branch office in Gibson. The public health personnel for the project consisted of: (1) pediatrician, (2) pediatric nurse, (3) five staff nurses, (4) sanitarian, (5) stenographer.

Public Health Activities: In cooperation with the medical and dental professions, the State Health Department undertook the complete physical examination of the school population including x-rays of all tuberculous suspects, and the promotion of treatment for the ill and the correction of physical defects through cooperation with local physicians. This part of the program was initiated by sending into the territory the pediatrician and nurse to conduct the examinations, organize prenatal and postnatal clinics, well-baby health centers, provide for the treatment of venereal diseases, and arrange the many details of the project. The five staff nurses do follow-up work, get mothers and children to the clinics, educate the people by organizing classes for young girls and women in the home care of the sick and first-aid. They supervise and instruct midwives, assist in obtaining specimens for laboratory examination and in the immunization of the population against smallpox, typhoid fever and diphtheria. The sanitarian assists in the control of hookworm disease, dysentery, typhoid fever and malaria by promoting the construction of privies, the screening of houses, the elimination of mosquito breeding p'aces, and the improvement of public and private water supplies.

Cooperating Agency Services: The Uni-

versity of Georgia Extension Service supplied the Child Health Demonstration project with the following personnel and services:

1. A chemist, who is a soil expert, to survey the area, analyze the soil, ascertain the crops most adaptable, and recommend the best practical methods to increase fertility. Primary consideration was given to what the people had to eat and how far the deficiencies in the essential elements of diet could be supplied from the local soil.

2. Farm demonstration agents for each county to encourage the application of the findings of the chemist, and other specialists, as well as promote crop rotation, animal husbandry, and other phases of county agent work.

3. Specialist in nutrition to study the present dietetic possibilities of the territory, recommend the most satisfactory regimes from the material at hand, and improve upon the foods available as the project develops.

4. Home demonstration agents for each county to instruct the housewives in the preparation and preservation of foods and balanced diets. These were assisted by instructions from specialists as follows: (1) food preservation, (2) clothing, (3) rural social life, (4) home improvement.

The State Department of Education supplied special teachers for children and adults in physical education and recreation.

Conditions in the Counties: It was realized that the success of an undertaking of this nature would depend, in great measure, upon the full cooperation of the laity and professional group which seemed assured in Hancock and Glascock counties. The following is a brief description of the two counties:

HANCOCK

County Seat, Sparta
Area, 530 sq. miles; population per sq. mile, 25
Per capita taxable wealth, $210
Population, 13,833—White, 3,813; Negro, 10,020
School enrollment, 3,653—White, 861; Negro, 2,722
Physicians, 5

GLASCOCK

County Seat, Gibson
Area, 170 sq. miles; population per sq. mile, 26
Per capita taxable wealth, $169
Population 4,707—White, 3,295; Negro, 1,412
School enrollment, 1,411—White, 913; Negro, 498
Physicians, 1

The area served by the Child Health Demonstration is largely rural. Other than about five per cent employed in the lumber industry and perhaps ten per cent living in towns, its people are engaged in farming. Seventy-five per cent of Hancock County farmers are tenants with 35 per cent of these on a share-crop basis. It is estimated that tenancy will not exceed forty per cent in Glascock. About fifty per cent of the soil in Hancock is clay or clay-loam, and the remainder sandy-loam. Glascock County is probably ninety per cent sandy-loam. Hancock has about thirty miles of hard surface roads and Glascock about four miles, the remainder being improved by grading and top-soiling.

In addition to the towns of Sparta, Gibson, and Mitchell, country stores are located conveniently at five to ten-mile intervals. Rolling stores serve about seventy per cent of the people on one-third of the principal road system, with regular schedules to each community one day a week. These stores serve as markets which take in exchange for goods any farm produce that is salable.

Tractors are used on a few farms; about one-half have good work stock; a small per cent plow with a single ox as the motive power. Transportation of lumber, goods, and people is principally by truck and automobile, yet one-horse wagons, oxcarts, and buggies are always in evidence. Many people walk from three to ten miles to town. White children are transported to consolidated schools by busses, while the Negro schools are so located as to be in walking distance of all pupils.

Dependency for the two counties, at the beginning of the demonstration, closely resembled that for the State-at-large. Public welfare statistics indicate that in Glascock 4.8 per cent, Hancock 4.2 per cent, and for the State 4.1 per cent of the population were either recipients of or applicants for direct relief. Recipients of surplus commodities are far in excess in point of number and are allotted in value nearly two-thirds as much as for direct relief purposes in Hancock and almost three times as much in Glascock. Each county is well represented in the Civilian Conservation Corps. Approximately ten per cent of the farm families of each county are Farm Security Administration clients.

There is no hospital in either county. However, there are hospital facilities available at Milledgeville, Sandersville, and

Augusta, within fifty miles of any section of either county. No free beds are provided for Hancock or Glascock residents at any hospital.

Activities

The Child Health Demonstration was put into operation on July 1, 1936. At the end of June, 1941, it will have been functioning five years. At the beginning surveys of sanitary conditions were made and measures for improving sanitation were outlined. Eighteen health centers, 14 in Hancock and four in Glascock, were established. These centers were so located that no person needed to travel more than three to five miles to reach a center. At these centers clinics were held monthly for both white and colored people, at separate stated hours. In Sparta, Gibson, and Mitchell clinics were held weekly. At these three centers, venereal disease clinics were conducted for the treatment of syphilis. Supervision and instruction of midwives were conducted, as the midwives brought their prenatals in for examination and advice.

Initial Findings: At the end of the first school year, the pediatrician had examined 1,804 school children—1,312 white and 492 colored, in the two counties. A resume of the findings follows:

	White		Colored		Total	
	Number	*Per Cent*	*Number*	*Per Cent*	*Number*	*Per Cent*
Nutrition	1,312	100	492	100	1,804	100
Good	384	29.26	112	22.76	496	27.49
Fair	507	38.64	200	40.65	707	39.19
Poor	421	32.08	180	36.58	601	33.31
10% Underweight for height-age	328	25.	134	27.23	462	25.60
20% Overweight for height-age	25	1.89	6	1.21	31	1.86
Anemia (Pale M.M.)	151	11.50	132	26.82	283	15.68
Enlarged Thyroid	28	2.12	20	4.06	48	2.66
Dental Caries	943	71.85	338	68.69	1,281	71.

Nutrition was emphasized in all conferences with mothers of infants and preschool children, as well as prenatal cases. Facts and figures showing the urgent need for a special demonstration were gathered from examinations of the school children of these two counties. Parents were urged to be present at each child's examination for a conference with the physician. To each that came a careful explanation of the child's nutritional condition and needs was made and his other defects (or freedom from them) discussed.

A brief analysis of these figures will emphasize some pertinent and interesting facts. The per cent of well-nourished white children (29.26) was only 6.5 higher than that of the colored children (22.76); in the groups classified as "fair," there were approximately two per cent more colored children; and among the poorly and very poorly nourished groups, there were only 4.5 per cent more colored than white children. More important than any comparison of these figures as to race, is a comparison of the total figures on nutritional status. Only 27.49 per cent of the 1,804 children examined could be said to be well-nourished and the nutritional status of many of these could not be classified as excellent. Approximately one-third of the total number (31.31 per cent) were poorly or very poorly nourished, leaving 39.19 per cent in the intermediate group.

Study of Diets: During the spring of 1938, a study was made of the diets of a selected group of children consisting of 44, ranging in age from three to five years, about an equal number of which were white and colored. These children were selected on the basis of having nutritional defects not apparently associated with or caused by disease and whose mothers were believed to have adequate intelligence and interest for cooperation. This study was made by the State Extension nutritionist from the University of Georgia. Data were collected by demonstration nurses under direction of the nutritionist. The method of obtaining diet records was:

1. For the most part, children who were free to gain were selected by supervising doctors and nurses.
2. Standard measuring cups and spoons were supplied women keeping records.

3. At the beginning, mothers of the children were visited and the keeping of the records explained by nurses, or the nutritionist.

4. At the end of three days, the women were again visited and the records carefully checked.

Analysis of Diets

1. The diet records were analyzed for the calorie, protein, calcium, phosphorus, iron, Vitamin A, B, C, and G content and compared with the best available dietary standards.

2. Due to the method of securing the dietary records, the small number of children used, the brief period during which the dietary records were kept, only general conclusions relative to the adequacy of the diets can be drawn. While there was only a small deficiency in the quantity of protein, the quality was poor due to the insufficient amounts of animal proteins used.

3. A deficiency of the bone building materials, calcium (41%), phosphorus (24%), appears to have existed, the lack of calcium being the most serious. Iron was generally lacking, there being a deficiency of 77 per cent.

4. Vitamin A was more plentifully supplied than the other vitamins, because of the quantities of sweet potatoes, collards, and turnip greens used. Information indicates that lean pork and peas and beans are excellent sources of Vitamin B and that corn meal is a good source of it. Because of the quantities of other foods used, this vitamin seems to have been more nearly adequately supplied than some of the other vitamins. However, this does not take into consideration all the losses in cooking. This information was not available in the case of some of the foods.

5. One of the most serious deficiencies appears to have been Vitamin C, 82 per cent. It is possible that the deficiency was more acute than the analysis of the diets shows due to the fact that information regarding the Vitamin C content of the cooked food in several instances was lacking.

6. Vitamin G was deficient in 80 per cent of the diets.

7. In general, the diets seem to have been adequate in quantity but poor in quality. They were least plentifully supplied with those materials necessary to build bones and teeth—calcium, phosphorus, and Vitamin C.

Study of Vitamin A Deficiency: During the early part of 1938, a study of the Vitamin A deficiency by use of biophotometer was done on a group of 250 children in the Sparta white school by a representative of the Georgia Experiment Station, from whose report the following is taken:

"During the testing period of each individual, records were taken by the questionnaire method on personal food habits, family food supply, and brief family history.

"Eighty-five of the pupils with the lowest biophotometer readings were divided into two groups, 25 of which were retained as negative controls and 60 given 17,000 units of haliver oil five days a week for four weeks. Upon re-testing, the oil subjects had gained significantly over the negative controls indicating that Vitamin A intake was beneficial.

"Though the food records were not quantitative, they did point out that the winter food supply was limited in vegetables and fruit, that the milk intake was low and the milk supply probably of poor quality due to lack of feed for the cows and that on the whole there was a meager egg supply for family use."

Study of Food Habits Through Nursing Visits: Beginning in May, 1938, the staff nurses were instructed to obtain information from mothers when making regular home visits, as to what food was available for family use on the previous day and to record this on case card of individuals visited. During September, analysis of this information revealed the following facts:

Glascock County—150 Families

Milk	80 per cent
Corn bread, only	4 per cent
Wheat bread, only	53 per cent
Both breads	40 per cent
Eggs	55 per cent
Peas	34 per cent
Beans	16 per cent
Cabbage	2 per cent
Corn	1 per cent
Turnips	13 per cent
Irish Potatoes	10 per cent
Sweet Potatoes	10 per cent
Tomatoes	27 per cent
Fat meat, only	43 per cent
Lean meat	10 per cent
Chicken	56 per cent
Fruit	18 per cent

Hancock County—130 Families

Milk	42 per cent
Corn bread, only	80 per cent
Wheat bread, only	13 per cent
Both breads	6 per cent
Eggs	10 per cent
Peas	39 per cent
Beans	14 per cent
Cabbage	15 per cent
Corn	14 per cent
Turnips	14 per cent
Irish Potatoes	17 per cent
Sweet Potatoes	7 per cent
Tomatoes	25 per cent
Fat meat, only	60 per cent
Lean meat	10 per cent
Chicken	8 per cent
Fruit	10 per cent

Special Nutritional Study Project: On November 15, 1938, a study of hemoglobin, calcium, and phosphorus content of the blood in a group of 60 children was

begun, representing white and colored farm families ranging in the economic bracket from rehabilitation clients to among the wealthier and most outstanding people in Hancock County.

Hemoglobin estimation was done with the Sahli Hemoglobinometer, and calcium and phosphorus determinations at the central laboratory. Physical examinations were made and recorded when blood specimens were taken.

Matthews Physiological Chemistry gives the calcium control of normal blood serum at nine to eleven mg., the phosphorus content at five in children, 3.7 in adults.

Nine per cent of the white and 7 per cent of the colored were low in calcium.

Twenty-seven per cent of the white and 32.5 per cent of the colored children were low in phosphorus.

Nine per cent of the white and 14 per cent of the colored children were low in hemoglobin.

Along with study of this group, county farm and Farm Security agents, in cooperation with the University of Georgia Extension Service, are making a study and analysis of the garden soils and vegetables with reference to mineral content, closely supervising the selection and growing of plants including recommendation of specific fertilizers for each garden. A garden project supervisor has been employed for carrying out this phase of the study.

These studies were undertaken with the hope of determining to what extent mineral content of soils may be reflected in vegetables and if vegetables with optimum minerals and color improve the calcium, phosphorus, and vitamin status of children using them; and further if by clinical examination, improvement in health, growth, and structural development may be demonstrated.

In June, 1939, the wrists of the children were x-rayed for evidence of pathological development of the bones. At the first examination, about one-third showed a low phosphorus content of the blood and about the same percentage were low in calcium. This low phosphorus content confirms previous figures from physical examinations that from one to two-thirds of the younger children show evidence of rickets. This was brought out further by the x-rays, which showed an osteoporosis of the bones which Karsner states may be due to a rachitic condition.

The soil of the gardens from which these children receive most of their food also showed a low calcium and phosphorus content. Many of the soil samples showed a high degree of acidity. It seems to be an established agricultural fact that highly acid soils will not give up their calcium and potassium content to vegetables grown upon them. This was borne out by the fact that the vegetables taken from these soils showed a lack of these materials. The proper fertilizers were added to the soils before the summer gardens were planted. A summary of the results on calcium and phosphorus determinations shows:

Calcium—

34 cases, 66 per cent, with significant increase.
14 cases, 27 per cent, with no significant change.
4 cases, 7 per cent, with significant decrease.

Phosphorus—

20 cases, 41 per cent, with significant increase.
23 cases, 47 per cent, with no significant change.
6 cases, 12 per cent, with significant decrease.

Calcium to Phosphorus Ratio—

10 cases, 21 per cent, with increased ratio calcium over phosphorus.
32 cases, 67 per cent, with no significant change in ratio.
6 cases, 12 per cent, with decreased ratio calcium to phosphorus.

In addition to these facts the general nutritional condition of the children showed an improvement on the second examination. In connection with calcium and phosphorus determinations it might be interesting to note that three cases of tetany in infants occurred during 1939. This disease is a calcium and Vitamin D deficiency disease, and all cases cleared up in a few days on the therapy of gluconate and cod liver oil.

Problems

The Child Health Demonstration has been handicapped from the beginning by frequent changes in personnel which were necessary for various reasons. In all, six directors have served on this project since its initiation. However, the outlook for the Demonstration now is more favorable than it has ever been. We have an excellent director and have adopted a far-reaching five-year work plan which we expect to

lene glycol. to be treated each week. Patient did not show up for second injection.

Case 2. R., white female, aged 22. Extensive psoriasis on arms, legs and body. Response to oral therapy slight. Injections begun by Dr. Fulton April 1, 1939: 50,000 units vitamin D in 2 cc. propylene glycol. Repeated April 8, April 15, and April 22. No response. Treatment stopped.

Case 3. A., white female, aged 42. Extensive psoriasis on arms, legs, body, and some scaling in hair. Patient had responded twice to massive doses of vitamin D by mouth. Subsequent relapse. Family physician administered 50,000 units vitamin D in 2 cc. propylene glycol at intervals of one week. No marked response. Last injection painful, treatment stopped.

Case 4. D., colored female, aged 54. Extensive psoriasis on body, arms, legs and neck. Response to initial treatment with massive doses of vitamin D satisfactory, but had subsequent relapses. This patient has had nearly every type of treatment suggested by the profession during the last ten years. Dr. Sydenstricker began injections Nov. 13, 1939, with 25,000 units vitamin D in propylene glycol. Repeated on Nov. 20; 50,000 units Nov. 27, Dec. 4, Dec. 14, Dec. 18, Jan. 3, 1940, Jan. 10, Jan. 17, Jan. 29, Feb. 7. There was some response to the treatment but not sufficient to warrant continuance.

The conclusions to be drawn from the last three cases is that some other factor than absorption must be responsible for the failure of vitamin D therapy in psoriasis. Two suggestions offer themselves in explanation of the failure, from the current literature; (1) the specific D used, and (2) the concomitant use of mineral oil as a laxative while undergoing treatment.

McCune,[8] 1940, has reviewed the relations of the various vitamins of the D group and the differences obtained in their therapeutic use in rickets. The crystalline vitamin used in these tests is a plant vitamin. The report of Thacker, 1940, on the oral administration of this vitamin in psoriasis is not as favorable as for the vitamin D of animal origin. The failure in the intramuscular tests may be due to the specific vitamin.

Smith and Spector,[9] 1940, have shown a very marked effect of the simultaneous ingestion of mineral oil and vitamin D upon the antirachitic action of the latter. They also showed that mineral oil picks up the endogenous vitamin D produced by irradiation in rats. It may be of significance that Case 4, the only patient that was thoroughly and critically tested, regularly used mineral oil as a laxative. This may be the reason for our failure.

We believe, however, that we are justified in creating a clinical "refractory psoriasis" following the lead of the pediatricians who recognize a "refractory rickets." (Allbright, Butler and Bloomberg,[10] 1937; Bakwin, Bodansky and Schorr,[11] 1940). The latter investigators suggest that vitamin D, like carotene, requires some activation before it becomes effective in the calcium-phosphorus balance. It is of further interest to note that in their cases a "stoss-doze" of 1,000,000 units daily was required to initiate a cure in rickets and a maintainance dose of 440,000 units was necessary to prevent relapse. This is just another example of cautious graded quantitative therapy as applied to individual cases. A parallel is at hand in the therapy of psoriasis. This requires a word in conclusion for the agnostic who claims that with a disease showing a high incidence of spontaneous regression the effect of any medication is unpredictable, and hence worthless.

An analysis of Matz's,[12] 1928, paper on diseases of the skin among ex-service men, shows that of 81 psoriatics, 4 were cured (spontaneous regression) while, under hospitalization for systemic disease, 63 were benefited. But 3 remained unimproved. The 5 per cent "cured" under this system still leaves 7 and 8 per cent difference to account for to make up the 12 and 13 per cent in the least favorable reports of Clarke and Wright under Vitamin D therapy. A complete control of psoriasis may not be at hand, but the results of vitamin therapy are at least as satisfactory as were the earlier efforts to cure pellagra.

*The vitamin D preparation used in these tests was supplied by the Winthrop Chemical Co., Department of Research Medicine. It was in the form of 2 cc. sterile ampules crystalline vitamin D in propylene glycol., R. 5204, 25,000 units per cc.

BIBLIOGRAPHY

1. Krafka, Jos., Jr.: A Simple Treatment for Psoriasis, J. Lab. & Clin. Med. 21:1147, 1936.
2. Ceder E. T., and Zon, L.: Treatment of Psoriasis with Massive Doses of Vitamin D (Ertron) Pub. Health Rep. 52:1580, 1937.
3. Brusting, L. A.: Treatment of Psoriasis with Vitamin D (Ertron) Proc. Staff Meet., Mayo Clin. 13:280, 1938.
4. Clarke, G. E.: Treatment of Psoriasis with Concentrated Viosterol, Arch. Dermat. & Syph. 41:664, 1938.
5. Thacker, E. A.: The Treatment of Psoriasis with Various Vitamin D Preparations, Illinois M. J. 78:352, 1940.

Balance of bibliography is omited for lack of space but will be included in reprints.

THE PRESIDENT'S PAGE



DEFENSE ACTIVITIES

Much has happened—and swiftly—since we wrote the short message for the December Journal on that clear, crisp Sunday afternoon a few moments after the flash from Pearl Harbor.

Donald M. Nelson has succinctly stated the goal of every man, woman and child in the United States of America:

"To make enough war material to lick Hitler and the Japs, and to do it in the shortest possible time.

"How it is done does not matter in the least; by whom it is done does not matter; what it costs does not matter. Nothing matters but doing it. We can't do it—we can't even come close to doing it—unless we make every other consideration secondary.

"You have read the magnificent story of the marines on Wake Island. You know what they did with four airplanes. Suppose that during the last 18 months we, the comfortable stay-at-home American people, had given that extra bit of self-denial and made that extra effort by which those marines could have had 50 airplanes instead of four: Don't you imagine the story today would be a little different? Different? Why, those boys would probably be in Tokyo by now—as conquerors, not as prisoners of war.

"Keep that Wake Island story in mind every day from now on. Use it as your measuring stick every time this nation has to make up its mind about some problem of industrial conversion, of expansion of production of raw materials, or any other phase of this tremendous effort.

"We may have to require management and labor to adapt themselves to wholly new schedules and methods of operation; we may have to upset commercial and industrial arrangements which have endured for many years; we may have to trample on all sorts of privileges and prerogatives. None of that matters.

"What of it? We cannot waste three months—or three weeks, for that matter—in wrangling and discussion; we cannot compromise this demand for all-out production just because someone's toes are going to be stepped on.

We can't waste anything. We can't let one worker or one machine be employed making goods for civilians unless those goods are things the country absolutely has to have in order to keep going. We can't use any of our basic raw materials for civilian manufacture unless the same test is met.

"Our only hope lies in the spirit which refuses either to count costs or recognize obstacles but which drives furiously ahead with the fixed idea that the important objective will be reached in spite of hell or high water."

Them's our sentiments to a "T."

Allen H. Bunce, M.D.

THE JOURNAL
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JANUARY, 1942

UNITED STATES PHARMACOPOEA

Since 1820 the United States Pharmacopoea has been revised every ten years. Soon the twelfth edition will be ready for distribution.

In medicine therapy now holds the spotlight. This is due to rapid progress in the manufacture, distribution and general use of so many new agents. A few of these are the vitamin products, serums and a new group of chemicals so useful in modern therapy. The United States Pharmacopoea is the guide and reference for the proper standardization and assay processes of all therapeutic agents.

The composition, manufacturing procedures, standards, assays, dosage and many other matters of importance will always be found in the U.S.P., therefore every physician should have a copy of this most valuable book in his or her library. He or she should familiarize himself or herself with its contents. By such knowledge the physician would most certainly aid his patient by the use of standardized products and the druggist would greatly benefit by more general use of the U.S.P. The general usage would greatly lessen the cost of medical care in addition to the assurance of the use of drugs, pharmaceuticals and chemicals with the highest purity.

There is a general tendency toward an international standardization program. The present status of insulin is an excellent example of the need of proper standardization. The patent soon expires, and the U.S.P. revision committee, in cooperation with the Food and Drug Administration of the Federal Security Agency, will assure diabetic patients a safe, standardized and potent insulin.

Another illustration is the lack of uniformity in digitalis preparations that has existed for many years. Every effort is being made to assure the physician that his patient will receive a safe and potent digitalis. These instances could be multiplied and extended, but suffice it to say that we as doctors are woefully lacking in the fundamentals and principles applied and used in the U.S.P.

Would it not be wise for more time and effort to be spent in medical colleges to acquaint the student with more general usage of drugs and the wise and economic administration of same? I believe so.

CARL C. AVEN, M.D.

THE ILEOCECAL VALVE OF MAN

According to Friedell and Wakefield, of the Mayo Foundation, the variations in the structure and competency of the ileocecal valve are associated with variations in the development of the cecum. The cecum of the human being is different from that of most animals. Huntington has adequately described these differences. Only the highest anthropoids have cecums which resemble those of man. The colon of a dog, however, is quite different from that of the ape or the human being and has no mechanical valve. Description of a sphincter at the ileocecal junction in dogs does not therefore make it applicable to man. The cecum is slow to assume its adult form in human beings. This latent development possibly accounts for the large number of imperfectly developed cecums found in adult human beings and also for the varying competency of the ileocecal valve. In the course of development of the cecum the valve frenulum first appears on the posterior side of the orifice of the ileum, and later the anterior frenulum appears. The frenulum is actually formed by a transverse fold (much like a haustrum) in the wall of the cecum at the point where it joins the ileum. On the external surface, this fold is represented by a deep crease in the cecal wall, which extends transversely from the ileocecal junction to beyond the anterior and posterior taeniae. The extent and depth of this fold is a good criterion by which to estimate the completeness and extent of the frenulum. When this crease is well defined the valve is competent. The taeniae do not dip into this crease or fold

but span the gap. They thus lend considerable support to the frenulum of the ileocecal valve. The medial taenia plays an especially important part by strengthening the valve very close to the orifice. If the medial taenia is torn, a competent valve is rendered incompetent. A fully developed adult cecum usually has a competent ileocecal valve; lesser degrees of competency are associated with incompletely developed cecums.

The manner in which the competent valve functions is simple. As the cecum distends, the frenulum becomes increasingly prominent and taut and the circular papillary-like orifice is drawn into a slit-like opening. The two valve segments are thus elevated and tightly approximated. The more distended the cecum, the tighter the approximation. The cecum must be distended in order for the valve to function. The competent ileocecal valve is very strong because it is composed of a double thickness of intestinal wall; therefore, it is less likely to give way than the wall of the cecum, when overdistended.

The importance of this in clinical application is obvious, and has been reported elsewhere. Perforation of the cecum can and does occur if the organ is allowed to remain greatly distended. The presence of a competent ileocecal valve makes undue procrastination hazardous, and treatment of the obstructed colon with suction tubes requires careful observation. If the pressure in the cecum rises too high, a competent ileocecal valve may become so tightly closed as to produce a secondary obstruction. Decompression of the small bowel with suction will give the patient symptomatic relief but increase the danger, since the pressure in the cecum is not relieved. The presence of a mechanically acting competent ileocecal valve necessitates the exercise of considerable caution and judgment in the treatment of the obstructed large intestine by decompression.

A great number of studies have been made of the ileocecal segment of the intestine. As a result of these studies, there are two theories concerning the mechanism which separates the ileum from the cecum: (1) the ileum is separated from the cecum by a sphincter muscle, and (2) the ileum is separated from the cecum by a valve. A great deal of emphasis has been given the theory that the ileum is separated from the cecum by a sphincter muscle because it was the only means of explaining a wide variation in the degree of competency or incompetency. If one assumes that there is a valve between the ileum and cecum, there is no adequate explanation as to how a valve may function with such wide degrees of adequacy or inadequacy. We believe it has been possible to show that the competent ileocecal valve has a constant structure and that the incompetent ileocecal valve has a variable structure. The degree of incompetency is related to variations in valve structure. It has further been possible to associate these variations in structure with variations in development of the ileocecal junction. In an organ that attains development late in fetal life and often does not develop completely until after birth, variations in structure are to be expected. Friedell and Wakefield believe, therefore, that adequacy or inadequacy of the ileocecal valve can be precisely explained by arrested development.

Application of this knowledge to clinical work does not greatly change our present conception of what should be done for a patient who has obstruction of the colon. It does, however, emphasize the fact that an absolutely competent ileocecal valve may exist, and this should always be kept in mind in cases of complete obstruction of the colon. Prolonged use of duodenal suction tubes may decrease the symptoms of obstruction of the small intestine. The general welfare of the patient will be improved by relief of the secondary obstruction of the small intestine by the so-called decompression tube but if this is persisted in, rupture of the cecum or colon is inevitable. Therefore, the introduction of duodenal suction in a case of obstruction of the colon does not relieve the internist and the surgeon of their responsibility of observing the patient closely and advising surgical intervention before it is too late.

Proceedings of the Staff Meeting of the Mayo Clinic, Rochester, Minn., Nov. 5, 1941.

U. S. PUBLIC HEALTH SERVICE NOMENCLATURE FOR SYPHILIS

New Terms and Explanation of Their Use

Primary—To include those cases presenting the primary lesion of syphilis (the chancre), which have not yet developed secondary manifestation. This diagnosis must be confirmed by darkfield examination, serologic test of the blood, or both. If blood serologic test is negative, the diagnosis of primary syphilis is not permissible without the demonstration of T. pallidum by darkfield.

Secondary—To include only those cases of early syphilis which show one or more of the manifestations of systemic dissemination of the spirochete; for example, generalized enlargement of lymph glands, cutaneous eruption, mucous patches, condylomata lata, patchy alopecia, laryngitis, bone pains, febrile reaction, etc. The chancre may or may not be present and if present may be in any stage of evolution. In early secondary cases the manifestations of systemic spirochaetal dissemination are increasing, have attained their maximum, or are waning. This diagnosis must be confirmed by darkfield examination, serologic test or both.

In early secondary syphilis and in addition to the manifestations listed above, ocular or neurologic complications (iritis, neuroretinitis, acute syphilitic meningitis) should be specially recorded as: "Syphilis, secondary, manifested by - - - - -"

Latent—Secondary symptoms have subsided and the active manifestations of late syphilis have not yet supervened. There are no evidences of syphilis other than a positive serologic test of the blood. Cases will be classified as: "Latent (early or late)—spinal fluid negative" or "Latent (early or late)—spinal fluid not performed (diagnosis tentative)." The date of the negative examination of the spinal fluid will be stated in all cases.

Tertiary—This classification is to be limited to cases that show active lesions of late syphilis. The lesion may be a gumma or it may be a diffuse process and may involve any organ or tissue of the body. The majority of all patients with tertiary syphilis will fall within six categories:

Mucocutaneous—Late syphilitic gummatous lesions of skin or mucous membrane.

Osseous—Periostitis, osteomyelitis, arthritis, synovitis.

Ocular—Iritis, uveitis, keratoiritis, keratitis, choroiditis, but not including optic atrophy.

Visceral—Hepatic, gastric, etc., but not including cardiovascular.

Cardiovascular—To include all lesions of the heart and great vessels. Classify as follows:

Aneurysm (saccular)—Do not use for a fusiform dilatation of the aorta. Specify artery involved.

Aortic regurgitation (aortic insufficiency)—Specify whether with or without cardiac decompensation.

Aortitis, uncomplicated—To be used only for those patients with symptoms and physical or x-ray signs of syphilitic aortic involvement in the absence of aneurysmal sacculation or aortic regurgitation.

Neurosyphilis—To include all cases with involvement of the central nervous system, classified as follows:

Asymptomatic—To be used only for those patients with early or late syphilis who have no symptoms or detectable physical signs of central nervous system involvement, and in whom the diagnosis is based on the routine finding of abnormalities in the spinal fluid.

Acute syphilitic meningitis—Usually occurs within the first two years of the disease, most commonly as a relapse phenomenon (neurorecurrence), manifested by the usual signs of low grade meningeal involvement, with or without cranial nerve palsies. Diffuse meningovascular—This is a catch basket category to include all patients with neurosyphilis who do not fit into other diagnostic categories enumerated. Manifestations to be stated in each instance.

Optic atrophy—Primary or secondary.

Tabes dorsalis—Manifestations to be stated.

Taboparesis—To be used only in patients with definite psychiatric signs of paresis complicated by definite clinically demonstrable evidence of damage to the posterior columns of the spinal cord.

Psychosis with syphilitic meningo-encephalitis (general paresis)—To be limited to cases which show psychic changes in addition to neurologcal signs and the characteristic changes in the spinal fluid. Cases with paretic type spinal fluid but without psychic changes will be reported as: "Syphilis, diffuse meningovascular, manifested by - - - - -," or as some other type of neurosyphilis.

Psychosis with neurosyphilis—To include neurosyphilis with psychosis other than cases of paresis and taboparesis.

If tertiary manifestations occur which do not fit into one of these categories, diagnose as:

"Syphilis, tertiary, otherwise unclassified"—Specify.

Type undetermined—To include cases in which accurate diagnosis has not been made. Every effort should be made to make a complete examination and proper diagnostic classification in all cases.

Congenital—To be limited to cases that show definite evidence of the existence or former existence of the characteristic changes of congenital syphilis, such as interstitial keratitis, Hutchinson's teeth, sabre shins, and other bone changes, saddle nose, eighth nerve deafness, etc. The congenital origin of syphilis is not to be assumed merely because the time and the circumstances of the infection cannot be ascertained and there is no scar of a primary lesion.

The suggested terms for various drug poisonings are intelligihle as they stand.

Spinal puncture for diagnosis or progress—This should be used in all cases (syphilitic or otherwise) routinely hospitalized for purpose of a spinal puncture.

Special therapeutic practices—This section has been included for it seemed desirable to indicate special therapeutic practices which necessitate hospitalization.

U. S. PUBLIC HEALTH SERVICE NOMENCLATURE FOR SYPHILIS

To be used in reporting all stages of syphilis on and after July 1, 1941

This list rescinds all diagnostic terms pertaining to syphilis now included in the U. S. Public Health Service Nomenclature of Diseases and Conditions, Revised 1935.

		Class No.
2100	Syphilis, primary	25
2101	Syphilis, secondary	25
	Syphilis, early latent (less than 4 years since infection)	
2102	Spinal fluid negative	25
2103	Spinal fluid not performed (diagnosis tentative)	25
	Syphilis, late latent (4 or more years since infection)	
2104	Spinal fluid negative	25
2105	Spinal fluid not performed (diagnosis tentative)	25
2106	Syphilis, tertiary — Otherwise unclassified	25
2107	Mucocutaneous	22
2108	Osseous	03
2109	Ocular (except optic atrophy)	10
2110	Visceral (except cardiovascular)	07
2111	Cardiovascular — Other	04
2112	Aneurysm (saccular)	04
2113	Aortic regurgitation (insufficiency)	04
2114	Aortitis (uncomplicated)	04
2115	Neurosyphilis — Otherwise unclassified	16
2116	Asymptomatic	16
2117	Acute syphilitic meningitis	16
2118	Diffuse meningovascular	16
2119	Optic atrophy	16
2120	Tabes dorsalis	16
2121	Taboparesis	20
2122	Psychosis with syphilitic meningoencephalitis (general paresis)	20
2123	Psychosis with neurosyphilis other than paresis or taboparesis	20
2124	Syphilis, type undetermined—To include cases in which accurate diagnosis has not been made	25
2125	Syphilis, congenital—Include all manifestations	25
3047	Arsenical poisoning	19
3058	Bismuth poisoning	19
3233	Iodine poisoning	19
3266	Mercury poisoning	19
2200	Spinal puncture for diagnosis or progress	49
	Special therapeutic practices	
2300	Fever therapy—Malaria	26
2301	Artificial	26
2302	Intravenous drip	26

The JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

JOURNAL OF THE A.M.A. OUTLINES NEW FEDERAL AGENCY'S FUNCTIONS

FIGURES ALSO GIVEN WHICH REVEAL SHORTAGE OF PHYSICIANS FACING THE NEWLY CREATED PROCUREMENT AND ASSIGNMENT SERVICE

The functions of the new Procurement and Assignment Service for Physicians, Dentists and Veterinarians, just created by the President as a part of the Office of Defense, Health and Welfare Services, are outlined in an editorial in *The Journal of the American Medical Association* for November 8. The scope of the problems confronting the new agency also is presented in the same issue of *The Journal* in an analysis of the nation's physician requirements which reveals that, even without any sudden expansion of the Army, between 2,000 and 3,000 physicians will be needed by various governmental agencies during the next year. The seriousness of this situation can be realized when it is pointed out that approximately 5,000 physicians are graduated by medical schools each year, barely sufficient to replace the number who die annually.

The Journal's editorial points out that: "One of the most significant actions taken by the House of Delegates at the annual session of the American Medical Association held in Cleveland in June was its approval of a resolution introduced by the Committee on Medical Preparedness urging that the United States government establish an agency for the procurement and assignment of physicians to meet the many needs arising out of the emergency in which the nation finds itself.

"On Friday, October 31, the President of the United States approved an order establishing a Procurement and Assignment Service for Physicians, Dentists and Veterinarians as a part of the Office of Defense, Health and Welfare Services under the direction of Mr. Paul V. McNutt to stimulate voluntary enrollment of these professions. The resolution of the House of Delegates also urged that this agency be under the direction of representatives of the civilian medical profession. The President has appointed as a board to administer the new service the following members: Chairman, Dr. Frank H. Lahey, President of the American Medical Association; Dr. Harold S. Diehl, dean of the medical school of the University of Minnesota and a member of the Education Committee of the Health and Medical Committee; Dr. James E. Paullin, who is retiring president of the American College of Physicians and chairman of the Council on Scientific Assembly of the American Medical Association and also a member of the Committee on Medical Preparedness; Dr. Harvey B. Stone, a member of the House of Delegates of the American Medical Association, of the Committee on Medical Preparedness and of the Council on Medical Education and Hospitals, and Dr. Caleb Willard Camalier, Jr., Washington, D. C., a past president of the American Dental Association and a member of its Committee on Medical Preparedness.

"The functions of the agency now established include primarily the procurement of personnel from existing

qualified members of the professions concerned. It is proposed that various governmental and other agencies requiring professional personnel for needs related to the emergency shall send their requests to the Procurement and Assignment Service indicating the number of men desired, the time during which they must be secured, and the qualifications and limitations placed on such personnel. The Service may then by appropriate mechanism arrange to secure lists of professional personnel available to meet these requirements, utilizing existing rosters such as the one now available in the headquarters of the American Medical Association and of the American Dental Association, or other public and private rosters which it may consider acceptable. The agency is also authorized to approach such professional personnel as are considered to be available and to use suitable means to stimulate voluntary enrolment. Emphasis should be placed on the fact that voluntary enrolment is desired and that modern means of procurement will be utilized. Already the states and many of the counties of the United States have been organized for military medical preparedness through the Committee on Medical Preparedness of the American Medical Association. Thus it becomes possible to determine availability of various physicians and their qualifications for special services. Obviously it is possible also in this way to protect the civilian needs of American communities.

"In its work the Procurement and Assignment Service is authorized to procure an executive secretary who shall serve as executive officer and who is to be a full time appointee with a salary. The members of the board which administers the agency are to serve, as does the Health and Medical Committee, whose organization it parallels, without salary. The board is authorized to secure such necessary assistants as may be required, to establish advisory committees and subcommittees representing the various interests which may be concerned, to develop suitable liaison with governmental and private agencies, to establish suboffices if they are required, and indeed to do almost everything, short of compulsion, that may be useful in supplying the Army, the Navy, the Public Health Service, essential industries and the civilian population with necessary professional personnel.

"Recently *The Journal* called attention to the problem created by failure of junior and senior medical students and of interns to avail themselves of the opportunities offered by the Army and Navy medical departments to become enrolled in official agencies which would make them available when called as commissioned medical officers. No doubt the new Procurement and Assignment Service will give special consideration to this phase of the problem. From the reservoir of young physicians coming into the practice of medicine must be obtained the majority of those needed for replacement of physicians now in service as members of the reserve corps. Should there be a sudden large expansion of our army, the number of physicians needed might approach ten thousand or more. The securing of these men could be brought about without jeopardizing the health of the nation by utilizing the complete cooperation of the medical profession."

In the Medical Preparedness Section of the same issue of *The Journal* appears an analysis of the present situation as regards the supply of physicians in the present emergency. Pointing out that the officers in the Medical Department of the Army today include 11,465 physicians in the Medical Corps, of whom 8,983 are reserve officers, 1,250 regular officers and 1,232 National Guard officers, *The Journal* says that "there is at present a shortage of 1,473 medical officers. . . . Should the Army not be greatly expanded within the next year but continue with a training program of about the present scope, a maximum of approximately 3,200 replacements would be required each year for the next five years during the period of the Selective Service Act. It is estimated that approximately two-thirds of the physicians now in service would elect to remain for the period of the emergency. If, however, it should not be possible to retain these men in service, the number needed for replacement would be considerably expanded."

In the Navy approximately 100 physicians are required at the present time as replacements and it appears that with the expansion now in prospect another 700 would be required by next July. To meet this need the Navy has a pool of 1,000 in its Reserve Corps. The calling up of these men obviously would reduce the number of physicians available for civilian and nonmilitary needs.

The United States Public Health Service requires about 35 new officers each year to meet its normal requirements for replacements, but in view of the present expanded activities approximately 100 interns in public health service institutions will be required within the next year. In addition, state health departments require about 150 additional physicians to meet new expansions.

The United States Veterans Bureau now has about 1,800 physicians in full time positions, about 500 of whom are in the United States Army Medical Reserve Corps. These 500 will require replacement if they resign their commissions in the Reserve Corps or if they elect to accept active duty with the Army.

The various federal agencies provided physicians by the Civil Service Commission employ about 2,500 doctors and need about 400 new men for replacements or for new positions each year. For the present fiscal year they lack 250 physicians to meet their requirements.

It is also pointed out in the analysis that the approximately 5,000 physicians graduated from medical schools of the United States each year are about the number needed to supply the hospitals capable of extending the education of the young physician by an internship with the interns that they require. Many smaller hospitals now are finding it difficult if not impossible to secure interns.

In addition to the demands made on the medical profession by the various governmental services there also is the necessity for some service related to civilian defense, to the Selective Service and to expanded war industries. —A. M. A. News, Chicago, November 6, 1941.

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1941

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R. N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna
Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

NURSING AND THE DEFENSE PROGRAM

Miss Frieda Grefe. R.N.
Savannah
Chairman, State Nursing Council for National Defense

In August, 1941, the Georgia State Nurses' Association, following the lead of the American Nurses's Association, established a State Nursing Council on National Defense. The object of forming this Council was to coordinate all nursing activities in Georgia that are directed toward the Defense Program. The Council has representation from all departments and sections and all fields of nursing.

The primary objectives are: The recruitment of more students for accredited schools of nursing; enrolment of eligible nurses in the Red Cross and Federal Services; the promotion of refresher courses for inactive nurses; cooperation in the programs of local civilian defense councils; cooperating with Red Cross activities by supplying registered nurse instructors for civilian courses in Home Nursing and First Aid, also to train voluntary nurses' aides under Red Cross regulations.

The first step in our defense program was the survey of all registered nurses to determine where the nurses are and what services they are equipped to render immediately and in the event of acute emergency. The returns, made available last August, have provided a basis for broad-scale planning. Duplicates have been made for each District Association and listed by counties. This will enable the Districts to contact every available R.N. for service.

A major part of the program for defense by the State Nursing Council, working through the national nursing organizations and allied groups, is the recruitment of student nurses. The Federal Government has called for the enrolment of 50.000 student nurses this year. An increased number of carefully selected students should result in a lower turnover of students, an increase of a better quality of service to the institution during the clinical periods of study, and a qualified group of graduates afterward. There is urgent need for more nurses today. It goes without saying that the need is for competent nurses. To this end standards of service must be safeguarded, and standards of nursing education must be maintained.

The program for recruitment started with the assembling of vocational guidance folders to be presented to all accredited colleges and high schools in Georgia by qualified speakers. The program also includes radio talks and announcements, newspaper releases and magazine articles.

All these are important channels of public information. But it should be remembered that the most effective method of promoting any program is through personal contact. Here, then, is the role of the individual nurse who can be a very helpful factor in creating an interest in nursing as a professional career. It should never be forgotten, however, that emphasis must be placed on the need for *well-prepared* young women to enter good schools of nursing. The nursing Council is taking into consideration the lessons learned during the first World War. At that time, the intensive recruitment campaign for student nurses resulted in approximately a 25 per cent increase in enrolment in schools of nursing, but there was not sufficient discrimination between good and poor schools, and careful selection of students was not emphasized. The result was under-education, over-production and unemployment.

The significance of the program of Federal aid to qualified schools of nursing for us as graduate nurses is primarily in the fact that more post graduate clinical courses will be available. If there are those who want to obtain special preparation for some type of nursing other than that in which they are engaged, this is preeminently the time to do it. Additional instructors for schools of nursing are badly needed and there are vacancies in practically all types of institutional positions and in the public health field.

A vital part of the civilian defense program is under the Medical Division of the office of Civilian Defense. Every nurse has been asked to make herself known to the proper authorities and offer

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WOMAN'S AUXILIARY : OFFICERS 1941-42

President—Mrs. Lee Howard, 625 East 44th Street, Savannah.
President-Elect—Mrs. J. Lon King, 223 Buford Place, Macon.
First Vice-President—Mrs. W. A. Selman, 760 Penn Avenue, N. E., Atlanta.
Second Vice-President—Mrs. Fred Rawlings, Sandersville.
Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta.
Third Vice-President—Mrs. J. R. McMichael, Quitman.
Recording Secretary—Mrs. J. C. Metts, 303 Anderson Ave., Savannah.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Treasurer—Mrs. Bruce Schaefer, Toccoa.
Corresponding Secretary—Mrs. Charles Usher, 6 East Liberty Street, Savannah.
Historian—Mrs. Ralph Freeman, Hoschton.

Public Relations

Mrs. H. M. Kandel, of Savannah, chairman of public relations of the Woman's Auxiliary to the Medical Association of Georgia, has issued an interesting message to Auxiliary members in the state. Mrs. Kandel says, in part:

"Our Auxiliaries over the state have an excellent opportunity to plan stimulating and timely public relations programs this year, having public relations chairmen work in cooperation with the health film and health education chairmen and using the new film service provided by the Medical Association of Georgia. Never has there been a more opportune time to present messages of health than now. The attention of the nation has been attracted by the reports of the draftee rejections. The concern for young men in service encampments has reopened the question of venereal disease control.

"The White House conference has driven home some startling facts about our nutritional status. Nutritional programs are extremely popular just now and there is an opportunity for service on the county nutritional committees and boards being organized in Georgia. Individuals and club groups alike are definitely health conscious. There is a direct challenge to Medical Auxiliaries to keep them so and to feed this interest by providing programs that bring authentic information.

"We must keep before our membership the necessity of being well informed and awake to the happenings in the field of health and public education. Our national chairman of public relations says: 'We must seek understanding for ourselves to the end that better understanding be reached with the public in the interest of better health.'"

Sixth District

Mrs. Harold Atkinson, of Macon, was elected manager at the recent meeting of the Woman's Auxiliary to the Sixth District Medical Society, which was held in Macon at the Baconsfield Club House, succeeding Mrs. Fred Rawlings, of Sandersville, who resigned. Other officers elected were Mrs. J. B. Dillard, of Davisboro, manager-elect; Mrs. C. H. Fulghum, of Milledgeville, secretary-treasurer; and Mrs. C. C. Harrold, of Macon, parliamentarian. The nominating committee was composed of Mrs. J. Lon King, chairman; Mrs. C. C. Hinton and Mrs. Sam Anderson. The members of the Auxiliary joined members of the Sixth District Medical Society for dinner at the club house later. Captain Justus M. Barnes, chief of the medical services at Camp Wheeler, spoke at the auxiliary meeting and Mrs. Y. H. Yarbrough, of Milledgeville, presided.

Dr. and Mrs. Ross Feted

Dr. and Mrs. S. T. Ross, of Winder, two of the most beloved members of medical and auxiliary circles in Georgia, celebrated their golden wedding anniversary recently in Winder with an open house. No formal invitations were issued but 400 friends from Winder and nearby called to offer congratulations and sincere good wishes to this beloved couple. Dr. and Mrs. E. R. Harris, Dr. and Mrs. W. L. Mathews, Dr. and Mrs. E. M. McDonald, Dr. and Mrs. W. T. Randolph, Mrs. C. B. Almand and Mrs. R. P. Adams assisted in entertaining.

Dr. Ross began active medical practice in Winder in 1892. For many years he has served as local surgeon for the Seaboard Air Line Railway, has been president of the Barrow County Medical Society and has served twice as president of the Ninth District Medical Society. Mrs. Ross is an active member and officer of the Woman's Auxiliary to the Barrow County Medical Society, has held office in the Woman's Auxiliary to the Ninth District Medical Society and in 1936 was corresponding secretary of the Woman's Auxiliary to the Medical Association of Georgia.

Baldwin County

Drs. Dawson Allen and George Allen showed moving pictures at the recent meeting of the Woman's Auxiliary to the Baldwin County Medical Society, held in Milledgeville at the home of the president, Mrs. Richard Binion. These films, which are talkies, are being exhibited over the state by the Medical Association of Georgia to further health education and the two shown were on cancer and tuberculosis. Mrs. Binion presided and distributed the year books. Mrs. Sam Anderson, Hygeia chairman, told of her planned campaign for subscriptions and Mrs. Edwin Allen gave the objectives for the year. Mrs. J. I. Garrard reported on the district convention in Sparta. Mrs. L. P. Longino, soloist, accompanied by Mrs. Charles Fulghum, gave a musical program. A social hour followed at which 18 members were served tea.

Fulton County

About 500 health leaders of Fulton, DeKalb and Rockdale counties attended the health edu-

cation meeting sponsored in November by the Woman's Auxiliary to the Fulton County Medical Society at the Crawford W. Long Nurses' Home in Atlanta. Mrs. Jeff Richardson, chairman of health films, explained how these films can be obtained by anyone interested because of the effort of the Medical Association of Georgia to present health facts and disease prevention to people of the state. The new sound films and film projectors in each district are owned by the Medical Association of Georgia. Dr. W. A. Selman, councilor for the Fifth District, talked on what the Association hopes to accomplish for health of Georgians by showing the films. Mrs. W. A. Selman, first vice-president of the Woman's Auxiliary to the Medical Association of Georgia, and health chairman, showed an interesting health film. Later luncheon was served with Mrs. Joe Boland and Mrs. Kells Boland, co-chairmen of the Red Cross committee, in charge.

The Woman's Auxiliary to the Fulton County Medical Society met in December at the Crawford W. Long Nurses' Home in Atlanta, Mrs. Murdock Equen, president, presided. Mrs. Harry Rogers, chairman of Research in Romance of Medicine, had charge of the program, which featured a talk by Dr. Sterling Clairborne on vitamins. Mrs. Rogers gave a paper on that romance in the research of today, especially pertaining to the new and interesting that has come to the fore in the warring countries abroad and in connection with national defense here. Mrs. Allen H. Bunce gave an interesting report on the recent meeting of the Woman's Auxiliary to the Southern Medical Association, held in St. Louis. The ways and means committee, Mrs. Charles Rieser, chairman, served luncheon.

Ninth District

The Woman's Auxiliary to the Ninth District Medical Society met recently at the Dixie Hunt Hotel in Gainesville. Mrs. W. T. Randolph, of Winder, manager, presided. Mrs. W. L. Mathews, of Winder, gave the invocation, after which Mrs. Garner, of Gainesville, welcomed the visitors. Mrs. C. B. Almand, of Winder, responded. Interesting talks were made by Mrs. Lee Howard, of Savannah, president of the Woman's Auxiliary to the Medical Association of Georgia; Mrs. J. Lon King, of Macon, president-elect; Mrs. Ralph Freeman, of Hoschton, historian; Mrs. Bruce Schaefer, of Toccoa, treasurer; Dr. J. A. Redfearn, of Albany, president-elect of the Medical Association of Georgia, and Dr. W. A. Selman, of Atlanta, councilor of the Fifth District. After the business and program, guests were entertained at luncheon. The next meeting will be held in Toccoa.

Second District

"We, as doctors' wives, have a certain obligation to carry on the educational program we have outlined for this year," said Mrs. Lee Howard, of Savannah, president of the Georgia Medical Auxiliary, when she spoke at the Second District Auxiliary meeting held in Tifton, October 10. She quoted the auxiliary objectives for the year, Mrs. Howard urged every doctor's wife to join the Auxiliary and familiarize herself with the state set-up.

She pointed out that "health is the most important factor in education" and that it is necessary for the home to be familiar with the program of education. It is up to the members of the different auxiliaries to reach out in the community and to sponsor public relations' meetings —both colored and white. Mrs. Howard said that "information is not education" and that we must intensify the program of showing health films. She asked that we go further than just informing people, we must arouse the interest of people!

Preceding the talk of the guest speaker, health films on tuberculosis and the fly were shown to the group of Auxiliary members by two health doctors—Dr. Readling, of Thomasville, and Dr. LeRoy, of Tifton. After a short business session over which Mrs. C. S. Pittman, of Tifton, president of the Second District Medical Auxiliary, presided, the meeting adjourned.

The members of the Tift County Medical Society were hosts to the members of the Second District Medical Society and Auxiliary and their guests at a banquet which was held at the Woman's Club. Dr. W. T. Smith, of Tifton, served as toastmaster for the occasion, presented an entertaining musical program which was followed by an interesting talk by Dr. Allen H. Bunce, president of the Medical Association of Georgia.

Richmond County

The Woman's Auxiliary to the Richmond County Medical Society held its October meeting at the home of Mrs. Ralph Chaney, Bransford Road, Augusta, Mrs. Lucius N. Todd, the president, presided. Mrs. Charles Mulherin, Health Chairman, told of plans for the public relations meeting.

Mrs. E. S. Sanderson, Chairman of Hygeia, gave a most interesting talk on the value of Hygeia to the members as well as the laity. Mesdames Cameron and Dalgo, wives of doctors stationed at the Air Base, were introduced as visitors; they were contacted by a committee appointed at the September meeting to call on all wives of doctors located in Augusta in connection with the national defense program.

Chairman of Organization and Membership, Mrs. J. P. Hitchcock, reported that she had written twenty-two eligible wives of doctors, invited them to attend the meeting and enclosed a copy of the "Doctor's Wife," by Dr. Rock Sleyster. She also told of the purpose of the Auxiliary.

Mrs. A. P. Briggs, representative from the Auxiliary on the Nutrition Council, reported that five members set up a canteen service during

the recent "air raid" on Augusta. Plans for a benefit dance were outlined by Mrs. Lombard Kelly. In the absence of a member of the Advisory Committee, who was to speak on Legislation, Mrs. Burpee read the bills on current legislation from the bulletin, following which Mrs. Ralph Chaney read the platform of the A. M. A. Mrs. W. F. Hamilton reported that during the past year she had turned in to the Red Cross twenty-five sweaters made by some of the members and nurses they had interested in knitting.

The Richmond Auxiliary held the annual picnic recently at Johnson's Lake, with Mrs. Lane Allen as hostess. The highlight of the meeting was the report of the state convention, at which Richmond County won the prize for the best visual report. The winning report was sent to the A. M. A. convention in Cleveland, Ohio. Richmond county was also runner-up for the Brawner trophy. The meeting was followed by the annual Doctors' Day party, which had been postponed.

The Richmond Auxiliary sponsored a health meeting recently at Reynolds school at which Dr. Robert V. Schultz, director of health education for the Georgia Department of Public Health, spoke on "Nutrition as a Basis of Health." Miss Mary Emma Barnes, nutrition consultant of the division of maternal and child health of the department, spoke on "The School Lunch." Miss Melba Sparks, county home demonstration agent, assisted the auxiliary in arranging the program.

COUNTIES REPORTING FOR 1942

Randolph-Terrell Counties Medical Society

The Randolph-Terrell Counties Medical Society announces the following officers for 1942:

President—S. P. Kenyon, Dawson
Vice-President—L. R. Massengale, Lumpkin.
Secretary-Treasurer—W. G. Elliott, Cuthbert
Delegate—W. D. Martin, Shellman
Alternate Delegate—L. R. Massengale, Lumpkin

Wilkes County Medical Society

The Wilkes County Medical Society announces the following officers for 1942:

President—A. W. Simpson, Washington
Vice-President—L. R. Casteel, Washington
Secretary-Treasurer—Robert G. Stephens, Washington
Censors—C. E. Wills, Washington, and H. L. Cheves, Union Point

Ware County Medical Society

The Ware County Medical Society announces the following officers for 1942:

President—Jos. R. Gay, Homerville
Vice-President—Braswell E. Collins, Waycross
Secretary-Treasurer—Kenneth McCullough, Waycross
Delegate—W. F. Reavis, Waycross
Alternate Delegate—Leo Smith, Waycross

Carroll County Medical Society

The Carroll County Medical Society announces the following officers for 1942:

President—B. C. Powell, Villa Rica
Vice-President—H. L. Barker, Carrollton
Secretary-Treasurer—D. S. Reese, Carrollton
Delegate—H. L. Barker, Carrollton
Alternate Delegate—W. P. Smith, Bowdon.

Walker, Catoosa, Dade Counties

Walker, Catoosa, Dade Counties announce the following officers for 1942:

President—Fred H. Simonton, Chickamauga
Vice-President—C. W. Stephenson, Ringgold
Secretary-Treasurer—Paul M. Golley, LaFayette
Delegate—R. C. Shepard, LaFayette
Alternate Delegate—Fred H. Simonton, Chickamauga

Clarke-Madison-Oconee Counties

Clarke, Madison, Oconee Counties Medical Society announce the following officers for 1942:

President—H. B. Harris, Athens
Vice-President—W. H. Cabanis, Athens
Secretary-Treasurer—Loree Florence, Athens
Delegate—W. D. Gholston, Danielsville
Alternate Delegate—S. M. Talmadge, Athens

Spalding County Medical Society

The Spalding County Medical Society announces the following officers for 1942:

President—H. W. Copeland, Griffin
Vice-President—A. H. Frye, Griffin
Secretary-Treasurer—T. F. Floyd, Griffin
Delegate—Geo. L. Walker, Griffin
Alternate Delegate—T. O. Vinson, Griffin

Douglas County Medical Society

The Douglas County Medical Society announces the following officers for 1942:

President—T. B. Taylor, Douglasville
Secretary—C. V. Vansant, Douglasville
Treasurer—R. E. Hamilton, Douglasville

Troup County Medical Society

The Troup County Medical Society announces the following officers for 1942:

President—J. S. Holder, LaGrange
Vice-President—C. W. Harvey, Hogansville
Secretary-Treasurer—J. W. Chambers, LaGrange
Delegate—C. O. Williams, West Point

Glynn County Medical Society

The Glynn County Medical Society announces the following officers for 1942:

President—T. V. Willis, Brunswick
Vice-President—M. E. Winchester, Brunswick
Secretary-Treasurer—T. W. Collier, Brunswick
Delegate—J. C. Hume, St. Simons Island
Alternate Delegate—T. W. Collier, Brunswick

Floyd County Medical Society

The Floyd County Medical Society announces the following officers for 1942:

President—Lester Harbin, Rome
President-Elect—Warren M. Gilbert, Rome
Secretary-Treasurer—Chas. I. Harris, Jr., Rome
Delegate—Robert E. Norton, Rome
Alternate Delegate—Edward Bosworth, Rome

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GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

OUR MUTUAL PROBLEM CHILD

How often the roseate dreams of the perfect child, held by so many fond parents, are rudely shattered by a kicking, screaming little reality. And how frequently, in their dismay, the parents bitterly blame each other for their mutual dereliction.

Public health personnel and private physicians find themselves in much the same situation when they consider how far short of ideal are the child health centers being conducted at divers points throughout Georgia. They are astonished to find that these centers have not developed as they had hoped, but are in sad need of improvement.

Before attempting corrective measures, however, it may be well to carefully scrutinize the problem. Child health centers were initiated on a statewide basis in Georgia in 1937. The medical profession formally adopted the plan under which they were established and, in the fall of 1938, provision was made for the payment of honoraria to private physicians for service rendered in these centers. Many physicians began to actively participate in the program and, at present, there are approximately 300 private physicians receiving fees for this service. Thus, the standards of child health centers have become a common responsibility.

Most of the difficulties that now confront both public health and the medical profession in the operation of child health centers have arisen because the centers were, of necessity, begun on the proverbial shoestring. It was not always possible in those first centers to maintain an adequate standard with respect to procedures, equipment, quarters, etc. Time and effort had to be directed toward promoting and establishing the program throughout the State.

In regard to promotion and establishment, it may be well to clarify a few vital points with respect to these centers. What is the purpose of child health centers? It is sincerely believed that these centers provide an excellent opportunity to improve the health of children in Georgia. What do we hope to accomplish through them? The chief aim of child health centers is to make thorough, complete examinations of all children so that physical and nutritional defects may be detected early in childhood when the possibilities of total correction are much greater. In addition a primary goal is to provide parents with essential information on the proper care and rearing of their children, such as:

1. Suggestions in regard to the child's general condition.
2. Detailed information on any deviations from normal, with recommendations for correction.
3. Instruction on proper daily habits and correction of undesirable habits.
4. Instruction on management of feeding and proper daily schedule.
5. Advice regarding immunization at most appropriate age, satisfactory hygiene practices, and any other practical information referable to child health.

The above is not a complete statement of aims and purposes but indicates the results to be striven for.

Child health centers have now been in operation long enough for most centers to be established on a firm basis. The value of the service cannot be doubted. Public acceptance of the program is an unquestioned fact, and continuation of the centers seems both desirable and assured.

Now, therefore, is the logical time to make a concerted effort to improve the centers and elevate existing standards. But before this can be accomplished, it is first necessary to examine the most prevalent faults.

Public Health

It is the duty of public health personnel to see that the quarters secured for child health centers have adequate space, are conveniently arranged and properly equipped and maintained. Often the centers are found wanting in one or all of these respects. Physicians would be justified in some instances in refusing to serve in some centers because of the inadequacy of quarters.

It seems ridiculous to teach hygiene in centers where the floors, walls, windows and other physical appurtenances are filthy. It seems foolish to attempt to examine children in dark rooms. It is disheartening to attempt parental instruction when noise prohibits conversation. If the physicians are to render service, the community should provide necessary facilities. Public health personnel should see that they do.

There is also too much variance in child health centers. They should be standardized as much as possible, taking local conditions into consideration, and those centers that have functioned for a reasonable length of time and are unsatisfactory should be discontinued if improvement is not possible.

Another error which has been all too commonly made by public health personnel is the initiation of child health centers before neces-

sary personnel, quarters and equipment were available.

There has been a lack of mutual understanding of routine procedures and objectives, which is no doubt due to the widely different viewpoints with which the problem is approached. Frank discussions of the problems in each locality and earnest attempts at revision will alleviate this difficulty.

Public health personnel is more interested in child health centers than physicians, in general, because they are more conscious of the value of preventive measures and more prone to stress health education. This is natural as they are trained for this work, instilled with special knowledge, imbued with certain ideals and dream of the day when preventive measures will be fully utilized. Nevertheless, a definite effort should be made to appreciate the private physicians' viewpoint.

Medical Profession

A large stumbling block in the path toward complete understanding on the conduct of child health centers is the fact that a number of physicians underrate the value of careful examinations of "supposedly healthy" individuals. Yet the results of examinations of selectees for army service, apparently in average health, proved beyond a doubt that healthy-appearing individuals are often suffering from defects which are the direct result of neglect or oversight during infancy.

Some physicians accept service in the centers under protest, because civic groups desire to sponsor the centers. This is regrettable because the success of the center depends to a *great extent* on the genuine interest of the clinician. It would be desirable if physicians would flatly refuse to serve rather than enter into the work half-heartedly.

Several counties, in which there are local health departments, operate no centers because the medical profession in those counties feel that the establishment of such centers should not be allowed. It is wise for local medical societies to continue to refuse until they are convinced that these centers are not inimical to their interests.

Unfortunately, local medical societies sometime insist that the conducting of child health centers be left to those physicians who have retired from active practice. It is apparent that this attitude deprives the centers of the best medical service available in those communities.

When the local medical profession does not desire or insist that the physicians participating choose the type of center of most interest to them, a constant rotation of physicians results. Such rotation prevents the growth of any real interest on the part of individual physicians. And the centers are denied the continued supervision by the same physician, who is familiar with their routine and problems.

At the time centers are established, it is understood that the sessions are scheduled for two hours. Nevertheless many physicians report late and desire to leave early. Naturally the center must not interfere with private practice but, if the required time cannot be devoted to center activities, it would be better if the physician would notify the health department of his inability to serve.

Improvement of Child Health Centers

As before mentioned, the most important steps to be taken in improving child health centers is the coordination of activities by public health personnel and the medical profession, the adoption of approved procedures and the achievement of a mutual understanding of the value of preventive medicine as practiced in these centers.

Local health departments and communities must make every effort to provide physicians with centers which are satisfactory from the standpoint of quarters, equipment and maintenance. Physicians should not accept service in centers unless they can devote the required time to them and are genuinely interested in the problem of child health.

An important factor to be agreed upon is the proper conduct of the centers, as the significance of satisfactory conduct of child health centers is seldom fully appreciated. The ability to conduct a center in a suitable manner must be acquired and adequate preparation is not offered by medical colleges. Few hospitals provide ample training and experience. Therefore, there is no reason to expect the physicians to have acquired the necessary information and technic unless the opportunity presented itself and was utilized. It would seem that the ideal method of preparation for conducting a center is to observe properly conducted centers. A demonstration center is particularly suitable for this purpose, if conducted by someone trained in the necessary routine.

Physicians should insist that the nurse prepare patients for examination, such preparation to include complete removal of clothing and draping. This is important not only because of the economy of time and effort but because of the maintenance of standards involved.

If no examinations are attempted, centers should be discontinued. To declare a child healthy without the semblance of an examination does not promote public faith in medical science.

If admitted to the center, sick children should be isolated from others and seen at the end of the session.

Repeated examinations should not prevent personal conferences with parents, and in giving advice the physicians should take into account

the economic status of the family. Medical advice given in the centers should be standardized as much as variance in personalities will permit. To illustrate the need for standardization, it may be pointed out that some physicians advise against all vitamin D preparations regardless of age or season. Others advise the use of condensed milk. Advice as to the inclusion of solid foods in the child's diet varies from four months to two years. Of course no two physicians will give the same advice for the same reason that they do not utilize identical measures in private practice. But many of the opinions given conflict with present day pediatric knowledge and certain basic and fundamental facts should be used by all well-trained physicians.

The quality of service rendered in these centers has many ramifications. It reflects the standards of medical practice and imbues the parent and child with a sense of the importance of a thorough examination. It helps instill in the minds of the parents confidence in the ability of physicians to locate hitherto unknown defects and promotes a desire for periodic examination. It makes the physicians conscious of health problems among children and provides an opportunity to learn from experience many practical measures useful in private practice.

It must not be assumed from the foregoing that there are no satisfactory child health centers in operation in Georgia. Many centers are conducted in an excellent manner and no criticism can, or should, be voiced. However, where improvement can be effected there is no reason for delay.

Public health invites the Georgia Pediatric Society and the medical profession in general to interest itself in this problem and this opportunity for service. District medical society meetings offer an excellent opportunity to discuss or demonstrate child health center procedures. The medical profession is asked to accept its share of this burden, as it is not possible for public health to assume the entire load. The job ahead can be accomplished jointly but not singly.

During the present emergency, as the number of available physicians declines, the program of child health centers assumes greater significance than ever before. Results of the service rendered through this medium will be seen in the strong bodies and sound minds of the coming generation.

EDWIN R. WATSON, M.D., Associate Director
Division of Maternal and Child Health
Georgia Department of Public Health.

HONOR ROLL FOR 1942

1. Randolph-Terrell Counties, W. G. Elliott, Cuthbert, November 21, 1941.
2. Dougherty County, I. M. Lucas, Albany, December 18, 1941.

THE DOCTOR'S CONTRIBUTION

The contribution of the medical profession to national defense deserves the widest possible recognition and understanding.

Since the passage of the Selective Service Act, some 6,444 medical boards have been established in this country. They have claimed the services of more than 25,000 physicians and 6,000 dentists. These men have examined upwards to 2,000,000 selectees—and they have not received one solitary penny in remuneration. If the examinations were appraised at the low figure of $10, this would amount to an outright donation of $20,000,000 by the medical profession to the cause of national defense. And that contribution has been made at a time when most groups are looking for new ways to tap the federal treasury.

This nation's goal is not to merely create and train a big army. The goal is an army which will he physically and mentally superior. The doctors who have given their services so freely to the nation are doing much to bring that about. The examinations provided selectees are complete and searching. In thousands of instances they have been the means of unearthing disabilities that men did not know they had, and starting them on curative programs. And after a selectee is taken into the army, he is given further exhaustive examinations and tests by the army medical corps, which is largely made up of reserve medical officers who have been called into service from private life.

It can be said categorically that this is the healthiest army we have ever had. The physical requirements are unprecedentedly high—far higher, for instance, than those prevailing in Europe. The doctor plays a great role in national defense.

—Columbus (Ga.) Ledger,
Columbus, Ga., Dec. 20, 1941.

COUNTIES REPORTING FOR 1942

(Continued from page 32)

Gordon County Medical Society

The Gordon County Medical Society announces the following officers for 1942:

President—M. A. Acree, Calhoun
Vice-President—J. E. Billings, Calhoun
Secretary-Treasurer—R. D. Walter, Calhoun
Delegate—W. D. Hall, Calhoun
Alternate Delegate—W. R. Barnett, Calhoun

Cherokee-Pickens Counties Medical Society

The Cherokee-Pickens Counties Medical Society announces the following officers for 1942:

President—Charles R. Andrews, Canton
Vice-President—J. T. Pettit, Canton
Secretary-Treasurer—Robert T. Jones, Canton
Delegate—C. J. Roper, Jasper

Cobb County Medical Society

The Cobb County Medical Society announces the following officers for 1942:

President—F. P. Lindley, Powder Springs
Vice-President—R. W. Fowler, Marietta
Secretary-Treasurer—M. N. McCall, Jr., Acworth
Delegate—M. M. Hagood, Marietta
Alternate Delegate—G. O. Allen, Marietta

Tift County Medical Society

The Tift County Medical Society announces the following officers for 1942:

President—R. E. Jones, Tifton
Vice-President—E. L. Evans, Tifton
Secretary-Treasurer—A. G. LeRoy, Tifton

NEWS ITEMS

DR. W. G. ELLIOTT, Cuthbert, reported the payment of all dues for 1942 for all members of the Randolph-Terrell Counties Medical Society on November 21, 1941. Dr. Elliott was the first secretary to report for 1942. Randolph county has led in the payment of dues for 20 years.

GEORGIA MEDICAL SOCIETY, Savannah, met on December 9. Dr. J. L. Campbell, Dr. William J. Murphy and Dr C. D. Bowdoin, all of Atlanta, spoke on *Cancer Clinics.*

THE MUSCOGEE COUNTY MEDICAL SOCIETY met at the Ralston Hotel, Columbus, November 25. Dr. W. Edward Storey spoke on *The Psychoneuroses, Their Recognition and General Management.*

DR. A. RALPH MARSICANO, formerly of Coolidge, has moved to Douglas and will serve as Coffee County Commissioner of Health.

THE MONTHLY STAFF MEETING of the Crawford W. Long Memorial Hospital was held on December 11. Dr. E. G. Ballenger and Dr. Harold P. McDonald reported two cases of *Plastic Operations on the Penis.*

THE REGULAR STAFF MEETING of the Georgia Baptist Hospital, Atlanta, was held on December 15. A *Clinico-Pathological Conference* was held.

THE GEORGIA PEDIATRIC SOCIETY held its annual meeting at the Biltmore Hotel, Atlanta, December 11. Titles of addresses on the program for the afternoon session were: *Epidemiology of Poliomyelitis* by Dr. Albert Sabin, Cincinnati, Ohio; *Active and Passive Immunization of Tetanus,* Dr. Philip F. Barbour, Louisville, Kentucky; *Sulfaguanidine Treatment of Bacillary Dysentery,* Dr. George Lyon, Huntington, West Virginia. Titles of papers on the program for the evening session included: *Address of Welcome* by Dr. Howard Hailey, Atlanta; *Response to the Address of Welcome,* Benjamin Bashinski, Macon; *Chemotherapy of Meningitis,* Dr. George Lyon, introduced by Dr. W. W. Anderson, Atlanta; *Rehabilitation of Poliomyelitis Patients,* Dr. Philip F. Barbour, introduced by Dr. R. G. McAliley, Atlanta; *Pathology, Symptomatology and Treatment of Poliomyelitis,* Dr. Albert Sabin, introduced by Dr. Joseph Yampolsky, Atlanta.

THE BIBB COUNTY MEDICAL SOCIETY met in Ridley Hall, Macon, December 16. Clinical cases were reported.

DR. HAROLD W. LONG, formerly of Milledgeville, has moved to Eastman and associated in practice with Dr. J. Cox Wall.

DR. E. J. WHELAN has been elected president and chief of staff of the St. Joseph's Hospital, Savannah; Dr. Henry C. Frech, vice-president; Dr. L. M. Freedman, secretary.

DR. WM. H. TRIMBLE has been elected president of the medical staff of the Piedmont Hospital, Atlanta; Dr. B. Russell Burke, vice-president; Dr. Sterling Claiborne, secretary-treasurer.

DR. ROBERT C. MAJOR, Atlanta, was a guest speaker before the Richmond County Medical Society, Augusta, on the subject of *The Use of the Bronchoscope in Diagnosis and Treatment.*

DR. J. E. L. JOHNSON, Roberta, was honored at dinner by the Roberta Kiwanis Club, December 2. Dr. Charles C. Harrold, Macon, was an invited guest and speaker.

THE STAFF MEETING OF EMORY UNIVERSITY HOSPITAL was held on January 6. Cases reported were: *Bacterial Endocarditis Ligation of Patent Ductus Arteriosus* by Dr. Dan Elkin; *Abdominal Pregnancy,* Dr. Walter Holmes; *Carcinoma of Uterus,* Dr. J. E. Scarborough.

DR. AND MRS. C. S. PITTMAN, Tifton, entertained members of the Tift County Medical Society at a turkey dinner on December 16. Business meeting was held and officers elected for the ensuing year.

O. R. STYLES, M.D.

DR. O. R. STYLES, Bowdon, after practicing 21 years in Bowdon and surrounding territory will move to Cedartown January 1 and continue to practice in his new location. The Bowdon (Ga.) *Bulletin* printed in its November 27 issue the following in reference to Dr. Styles:

"At present Dr. Styles is the regular appointed conductor for about 12 life insurance companies and also has been designated by the Bowdon Textile Rubber Company as their physician in case of accident to employees while on duty.

"Dr. Styles has not only been active as a physician, but has always been interested in the civic development of the town and a liberal contributor to all benevolent causes. He was a member of the Board of Trustees of the Bowdon Normal and Industrial College for 11 years and a member of the University of Georgia Board of Trustees, now Board of Regents, for seven years, being appointed by three different governors. He was responsible for the building and naming of Adamson Hall and a member of the building committee of the Baptist Church and chairman of the building committee of the Baptist pastorium.

"He was one of the first directors of the present Commercial Bank and at present is a director of the Carrollton Federal Building and Loan Association.

"He was associated at Bowdon College with the Sewell boys and later, through their friendship, was influential in helping bring Sewell Manufacturing Company to Bowdon.

"Dr. Styles' practice includes the western part of Carroll County and eastern part of Alabama, covering a territory of from 15 to 25 miles in all directions. Beginning his practice in 1920, he drove over the rough country roads of those days in the first enclosed Ford ever sold

in Carroll County, he having purchased it the previous year. He also built the first brick veneer home ever constructed in Bowdon in 1928. In addition to his home, he owns considerable farm land, in and near Bowdon."

OBITUARY

Dr. Frank West Coile, Winterville; member; Emory University School of Medicine, Emory University, 1891; aged 77; died on December 14, 1941. He was a native of Winterville and had lived there practically all his life. Dr. Coile was a member of the Clarke County Medical Society, Southern Medical Association, F. & A. M. and the Baptist church. Surviving him are four daughters, Mrs. L. A. Foster, Fort Gaines; Mrs. C. H. Hagerty, Decatur; Mrs. B. F Eubanks, Winterville, and Mrs. Frank O'Farrell, Atlanta; three sons, T. F. Coile, Marietta; W. V. Coile, Cuthbert, and J. M. Coile, Blakely; two brothers, Rev. W. M. Coile, Winterville, and Dr. J. G. Coile, Bowling Green, Florida. Rev. Rutherford Coile and Rev. R. H. Timberlake officiated at the funeral services conducted at the Winterville Baptist church. Burial was in the Winterville cemetery.

Dr. Alexander Dawson, Atlanta; Southern Medical College, Atlanta, 1891; aged 77; died on December 2, 1941, at his home. He was born and reared in Atlanta and devoted his entire professional career in practice in and near Atlanta. Surviving him are three sisters, Miss Leanna Dawson, Mrs. Sam Hape and Mrs. R. P. Malaier; one brother, McCallum Dawson, Decatur. Rev. Harold Shields officiated at the funeral services conducted at Spring Hill chapel. Burial was in Oakland cemetery.

Dr. Thomas Sargent Bailey, Newnan; member; Atlanta College of Physicians and Surgeons, Atlanta, 1902; aged 66; died on December 13, 1941. He practiced medicine for almost fifty years in Newnan and surrounding territory. He had a reputation for being an outstanding physician. Dr. Bailey was local surgeon for the Atlanta and West Point Railroad for many years; member of the Coweta County Medical Society, F. & A. M., Shrine; member and steward of the First Methodist church. Surviving him are his widow, one daughter, Mrs. Geo. F. Hagood, Marietta; one son, Dr. Thomas S. Bailey, Jr., Albany. Funeral services were held at the First Methodist church. Burial was in Oakdale cemetery.

Dr. John Hill Hammond, LaFayette; member; Jefferson Medical College of Philadelphia, Pa., 1883; aged 85; died at his home on November 26, 1941. He was a native of Chattooga county. Dr. Hammond attended the common schools of Chattooga county, began studying medicine at the University of Georgia School of Medicine, Augusta; then studied and received his M.D. degree at Jefferson Medical College. His entire years of practice was at LaFayette, except two years spent at Monroe. Dr. Hammond was commissioner of health of Walker and Catoosa counties for eleven years. He served on the LaFayette Board of Education, as councilman, and as county commissioner. He was a member of the Walker County Medical Society, American Medical Association, F. & A. M., Shrine and the First Baptist church. Surviving him are two daughters, Mrs. E. P. Hall, LaFayette, and Mrs. W. E. Gray, Swainsboro, and four grandchildren. Rev. H. L. Wood, Rev. Taylor Morton and Rev. W. E. Storey officiated at the funeral services conducted at the First Baptist church. Interment was in LaFayette cemetery.

Dr. Eugene Leffler Gilmore, Tallapoosa; member; Marion-Sims College of Medicine, St. Louis, Mo., 1892; aged 72; died on November 16, 1941, after an illness of several weeks' duration. He was born and reared in Iowa; attended the common school of Iowa, then received a B.A. degree from Cornell University. Dr. Gilmore was at one time associated with Abbott Laboratories, North Chicago, later with other laboratories. He had a pleasing personality and made many friends. Surviving him are his widow and one sister, Mrs. Carlos Vallejo, Buenos Aires, Argentina, S. A. Rev. R. O. Flinn and Rev. T. J. Espy officiated at the funeral services. Burial was in Hollywood cemetery in Tallapoosa.

Dr. Samuel Cathcart Ketchin, Louisville; member; Medical College of the State of South Carolina, Charleston, S. C., 1916; aged 50; died on Decemher 22, 1941, at his home after an extended illness. He was a native of Winnsboro, S. C. He attended the common schools of Winnsboro, then received his collegiate education at Erskine College. Dr. Ketchin served in the medical corps of the United States Navy during the World War. After the World War he began the private practice of Medicine in Louisville and made many warm personal friends. He was a member of the Jefferson County Medical Society, served on the Board of Education of the Louisville Academy, Jefferson County Commissioner of Health, and a member of the Presbyterian church. Rev. M. R. Plaxco officiated at the funeral services. Interment was in Louisville cemetery.

Dr. Charles Van Wood, Cedartown; member; University of Tennessee College of Medicine, Memphis, Tenn., 1896; aged 66; died on December 23, 1941, after an extended illness. He was a member of one of the pioneer families of Polk County. There are few men in that section who had so many friends. He was a member of the Polk County Medical Society and the First Methodist church. Surviving him are his widow, one daughter, Mrs. A. W. Roberts, Orlando, Fla. Rev. W. J. Kerr officiated at the funeral services conducted at the First Methodist church.

The pictures of patients with tuberculosis in our medical textbooks are those of emaciated and cachectic individuals when they should be those of apparently healthy specimens. It is in these apparently healthy specimens that disease is so often found and causes so much destruction. A. M. Dietrich, M.D., Del. Med. Jour., Aug., 1941

BOOK REVIEW

The Treatment of Infantile Paralysis in the Acute Stage. By Elizabeth Kenny. Bruce Publishing Co., Minneapolis-Saint Paul. 1941.

This book reviews in detail the struggle Miss Kenny had in getting the medical profession in Australia, England and the United States to approve of her method of treating infantile paralysis. Many of the chapters are lectures which have been given at different times. There is a great deal of repetition in the book. It seems that for generations, doctors who have been trained to make accurate, scientific observations have all erred in their study of infantile paralysis, and have formed a false conception of the disease. Since their conception is wrong, it naturally follows that their treatment is wrong. The book can best be summarized by quoting the nine points which Miss Kenny makes. Page 112. "Orthodoxy sees a disease where:

1. The muscles affected are never spastic.
2. The affected muscles hang loosely like a hammock between their two points of attachment.
3. Coordination is never damaged or destroyed or disorganized.
4. The patient never loses the power to control any function that may be left.
5. The nonaffected muscles involuntarily contract.
6. It is necessary to apply splints to attempt to prevent deformities.
7. Stiffness is a troublesome feature and prevents the patient's cooperation in reeducation by orthodox measures.
8. Mental alienation of the part does not exist.
9. The muscles affected by the disease are pronounced to be definitely flaccid.

On the contrary, the disease treated by the Kenny system presents, in every respect, the opposite clinical picture, that is:

1. The muscles affected present the condition of spasm.
2. The affected muscles become shortened.
3. Coordination is disorganized and incoordination frequently seen.
4. The patient frequently loses power in nonaffected muscles as well as affected.
5. The nonaffected muscles frequently refuse to contract.
6. It is not necessary to apply splints, casts or frames to prevent deformity in this system for deformity does not occur. This is admitted in all the reports of all medical men who have observed the actual work.
7. Stiffness does not exist owing to the fact that the symptoms causing stiffness are treated from the onset in the acute stage.
8. Mental alienation is accepted as the most damaging symptom and treated immediately.
9. Spasm is present and the opposing supposedly flaccid muscles are not treated. The reason for this flaccid condition is that the opposing affected muscles, which are in spasm, are pulling the nonaffected muscles from their normal resting place and retaining them in this lengthened position through unrelaxed spasm in the affected group."

J. HIRAM KITE, M.D.

CAN YOU PROVE YOU WERE BORN?

During the first six months of 1941, 11,120 people wrote the division of information and statistics of the Georgia Department of Public Health not only for proof that they were born but to establish unquestionably where and when the birth occurred.

There has been a tremendous increase in the demand for certified copies of both birth and death certificates, due to regulations of defense industries and stricter requirements in all lines of employment. To date 15,389 people have been supplied with certified copies of certificates, mostly of births, this year in comparison with 9,752 in 1940 and 1,969 five years ago. In addition, verification has been made of the ages of hundreds of young men enlisting in the armed forces and thousands of boys and girls employed in industries because of child labor laws.

If you need to establish the date and place of your birth, follow these simple rules. Secure from the Georgia Department of Public Health, Atlanta, a standard delayed certificate of birth form. Read the instructions carefully before attempting to complete the blank. Fill in the form and supply the supporting evidence required. This evidence is all important as the value of the certificate depends on it.

If you need help in filling out the form or in securing necessary proof, go to your county health officer, ordinary, clerk of the court, judge, or State Health Department. They will be glad to help you.

SQUIBB INTRODUCES PRODUCT FOR SIMULTANEOUS IMMUNIZATION AGAINST DIPHTHERIA AND WHOOPING COUGH

The first preparation for simultaneous immunization against diphtheria and whooping cough to be made available commercially in this country is now offered by E. R. Squibb & Sons, New York, in Diphtheria Toxoid Alum Precipitated - Whooping Cough Vaccine Combined Squibb. Each 1 cc. of the combination product contains a full immunizing dose of Diphtheria Toxoid Alum Precipitated and 10,000 million killed Bacillus (hemophilus) pertussis.

This new product possesses the advantage of convenience and economy, and in addition, with a combined product of this type, the antibody responses of the two antigens tend to complement each other. The reactions to the combined antigens are apparently no more frequent or severe than those following the use of diphtheria toxoid alum precipitated.

To be on the safe side, it is suggested for the present that three or four injections of 1 cc. each of Diphtheria Toxoid Alum Precipitated - Whooping Cough Vaccine Combined Squibb be given at monthly intervals. This will confer a high degree of immunity to diphtheria and should afford adequate protection against whooping cough. Immunization is recommended for all children over six months of age.

Diphtheria Toxoid Alum Precipitated - Whooping Cough Vaccine Combined Squibb is supplied in 5 cc. vials containing sufficient vaccine for five injections.

GEORGIA STATE NURSES' ASSOCIATION

(Continued from page 29)

her services for the duties she can perform and the time she can give. It has been recommended that the personnel of each Local Medical Advisory Committee shall include a nurse. It has been further suggested that the nurses selected for these posts be graduate registered nurses; that they be nurses of recognized professional standing in the community; that they be available for meetings.

The First Reserve of the American Red Cross Nursing Service needs literally thousands more nurses — not all for active service at once, of course, but there must be a large reserve enrolled. Many times the number actually needed for active duty must be enrolled and ready in order that we may be prepared for all eventualities. The nurses enrolled in the second reserve, or home defense, are playing a vital part in the defense program of our country. They are teaching the Red Cross courses in Home Nursing, teaching and supervising volunteer nurses' aides, teaching first aid classes, replacing nurses drawn from hospitals for military service, serving on Red Cross Committees to encourage enrolment and are ready to give their services in disasters in local communities.

Everyone of us, and every organization or profession, and every man made institution, is on trial in this world today. It, therefore, behooves us to see clearly and to act wisely, not only as individuals, but as a mighty group. We all recognize the implications for nursing in the present situation. It seems that every task which has been required of nurses and nursing organizations has brought increasing evidence of readiness to accept full responsibility. We are aware, not only of the present need for our services, but also of our ability to meet that need and to anticipate and prepare the way to meet future needs in nursing.

Whether we are doing public health, private duty or some other type of nursing is really of no importance so long as the work we are doing is needed and we are doing it well. There are many different fields of nursing and many nursing organizations, but there is only one profession. We bear in mind first, last and always, that we are nurses, and that nursing has but one goal; that is, adequate nursing service of all types for all of our people.

Miss Isabel Stewart put this thought tersely, when she said, "Nurses are on the job; they have a plan, and they will deliver the goods."

The Bon Air Hotel, Augusta, will be headquarters for the next annual session of the Association, April 28-May 1, 1942.

The American Board of Obstetrics and Gynecology will conduct examinations in Atlantic City, N J., June 3 through June 9. Just prior to the opening of the annual session of the A.M.A.

The Medical Association of Georgia will hold its Ninety-Third Annual Session at the Bon Air Hotel, Augusta, April 28-May 1, 1942.

WANTED—DOCTOR

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"C" care The Journal.

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Department for Women

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The following hospitals are registered by the Council on Medical Education and Hospitals of the American Medical Association, American Hospital Associaton, and the American College of Surgeons.

Crawford W. Long Memorial Hospital

Georgia Baptist Hospital

Piedmont Hospital

St. Joseph's Infirmary

Emory University Hospital
(Wesley Memorial)

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THE TYPES OF STERILITY IN THE FEMALE THAT ARE AMENABLE TO TREATMENT

EDGAR H. GREENE, M.D.
Atlanta

A review of literature shows that sterility in women is by no means a modern problem. From the earliest era in medical lore the childless home has been studied by physicians. In 1609 Hucherus Bellovacus wrote a treatise on the subject, and during that century nineteen other important Latin and Greek essays appeared using the home without children as their theme. Each succeeding generation contributed to an increase in the literature with a gradual development of information concerning the causes and treatment of sterility.

The laity, and to some extent the physicians, have placed the blame for an unfruitful marriage upon the wife. We now know this to be unjust. Although, the fault may be in the female pelvis or adjacent and related structures, sterility is frequently in the male. (Some authors attribute 30 per cent to the male). Therefore, the condition of the husband should be investigated.

Often, in recording histories, it is learned that a woman has been subjected to an operation for the sole purpose of exploration and of relief of the cause of sterility. Institution of such radical measures may be prevented to some extent, if proper attention and careful study be given to the numerous causes of sterility and an attempt made to apply the findings in each case. By this procedure many cases will be found that offer a reasonable chance for correct diagnosis and successful treatment. Before instituting treatment for sterility, there are two primary requisites: First, a serologic test for syphilis and a basal metabolism test. Second, eliminate all local infections.

A complete classification of the causes of sterility will not be attempted in this discussion, but emphasis will be limited to those conditions which, after diagnosis, have been found amenable to treatment. A comprehensive and simple classification of such types may be as follows:

1. Anatomic.
2. Endocrine dysfunction.
3. Miscellaneous.

Often, under one of these headings, with the subdivisions which develop, is found a cause of sterility. Treatment may then be more definitely directed.

Example: G. H. was a normal, well developed married woman, aged 22. She had been married 3 years. There had been no pregnancy although menses had been regular but scant. The history was irrelevant with the exception of several examinations after which no treatment had been suggested. Pelvic examination revealed normal external genitalia. The vagina appeared normal but no cervix could be palpated. On speculum examination no cervix was seen. On rectal examination an apparently normal uterus was palpated. She was instructed to return during next menstruation, which she did and through the speculum a drop of blood could be seen on the posterior vaginal wall. This spot was marked with a stain and upon cessation of menstruation operation was done. The posterior vaginal wall was opened and the cervix found between the peritoneal and retrovaginal folds. The incision was enlarged sufficiently to allow the cervix to be pulled into the vagina. The surface of posterior vaginal wall was cut and sutured around the neck of cervix, which was dilated. Within 10 weeks, following dismissal from hospital, she was pregnant and subsequently delivered at term.

While this case is attributable to an anatomic type of sterility, it is more specifically a congenital malformation. In this classification we should consider "double vagina" and bicornate uterus. Both are relatively rare conditions, but occasionally are encountered in women otherwise normal. Here surgery is indicated and is especially successful in a case of double vagina. These conditions are not as easily recognized as an imperforate hymen; careful examination, however, reveals them frequently to the embarrassment of one or more physicians. A definite diagnosis and a little surgery attains in a short

Read before the Medical Association of Georgia, Macon, May 14, 1941.

time what gonad and vitamin injections could never accomplish.

Malposition of uterus, i.e., anteflexion and retroversion, is frequently responsible for sterility. The abnormal position of the fundus may so displace the cervix that the semen cannot enter the os. Severe displacement may produce sufficient angulation of the uterine canal at the neck to occlude the canal. Marked dysmenorrhea, early in the menstrual cycle, is often experienced when this condition exists. Sounding the uterus followed by intubation and injection of the husband's viable semen well past the internal os is easily accomplished and should be proposed to the patient before surgery is attempted. Even so simple an operation as cervical dilatation requires anesthesia and hospitalization and offers no more and probably less hope for subsequent pregnancy than the simple insemination procedure. Major surgery should be performed as a last resort. If laparotomy is done and the uterine displacement corrected, the technical procedure should be followed which contemplates the free movement and enlargement of the uterus during pregnancy and will be less likely to produce dystocia. Plication of the round ligaments as described by Long, in my opinion, is the operation of choice in these cases.

Obstruction of the cervical canal by new growths, the most common being simple polyp, obviously requires complete extirpation and healing before conception may be expected. Obstruction, due to thick cervical secretions and mucus plugs which fail to disappear following treatment, may be overcome by intubation and injection of the husband's semen beyond the internal os. This procedure often brings about conception in cases of sterility where the vaginal secretion devitalizes the sperm.

Mrs. B., aged 29, married 2 years. A Bartholin gland had been drained about 18 months before. History was otherwise irrelevant. There had been no pregnancy. Had Rubin test in another city. She was told that her fallopian tubes were occluded, but a second test a few days later revealed the tubes to be patent. She was advised to have the tubes insufflated at intervals. When she was later referred to me, I found nothing abnormal on pelvic examination but noted that the uterus was retroverted and that the cervix was rather high under the symphysis. Two months later I suggested that a Hühner test be done. The spermatozoa were viable and ample in number. A favorable date in the menstrual cycle was selected for intubation of the cervix and injection of semen. Pregnancy ensued and she was delivered in due course of a full term baby.

There is a condition seen occasionally in which the isthmus of the tube shows a complete occlusion following injection of iodized oil, but patency is later demonstrable following relaxation of the spastic area. The cause of this reaction is not definitely known but it is observed usually in the highstrung, so-called nervous type individual. Whether a somewhat similar phenomenon prevents conception is problematical.

In a paper, "The Injection of the Uterus and Fallopian Tubes with Iodized Oil," presented before the Medical Association of Georgia in 1927, Dr. R. C. Pendergrass and I demonstrated this condition with illustrations from x-ray films. We stated that, in cases of old infection, we believed that the iodized oil had a therapeutic effect on the uterine canal and fallopian tubes. Uterosalpingography sometimes reveals a very small lumen in each fallopian tube. The narrowness may be the result of minute adhesions or may be the result of uniform constriction of the tubes. In 1934 G. K. F. Schultze showed that the injection of iodized oil primarily for diagnostic purposes had a therapeutic effect in a considerable number of cases. Injection of iodized oil as an opaque medium for x-ray study is frequently the answer to the therapeutic problem, as the following case report will illustrate:

Mrs. C., aged 23, married 3 years. No pregnancy. Injection of uterus and tubes with iodized oil revealed patent tubes of "hairline" type. There was no further treatment. She became pregnant before the next regular menstrual time and progressed to term and normal delivery.

Disturbed function of the glands of internal secretion, chiefly the ovaries, thyroid, pituitary and the mammary glands, play a definite role in many cases of sterility. With the improved methods of diagnosis and the potency of estrogenic hormones these patients, in many instances, are now treated with gratifying results. Endocrinologic dysfunction in sterility is a subject of such magnitude that time prevents more than passing comment. We should bear in mind the interrelationship between the pituitary,

ovary and thyroid in certain cases of sterility. Consideration should be given to the deleterious effects upon one or more of these glands by climate, diet, drugs and emotions. The normal function of these glands is essential if conception is to be expected.

Major surgery for tubal occlusion offers hope of success if the occlusion is at the fimbriated extremity. If the ovaries are reasonably free of adhesions so that normal eruption of the follicle ensues, a simple plastic operation on the fimbriated extremities often proves beneficial. In my experience this is the only type of tubal operation that has been successful. Prognosis in other tubal operations, especially implantation, should be even more guarded. Should pregnancy occur (following implantation) miscarriage, or more probably tubal pregnancy might result. A case of pregnancy and labor, with rupture of the uterus following this type of operation, has been reported. The operation devised by Estes, wherein an ovary is sutured over the prepared cornu of the uterus is reasonable. The technic is not difficult. While I have done this and similar operations in some cases of chronic pelvic inflammatory disease, I know of no patient that subsequently became pregnant. I have found in the literature several cases reported in which pregnancy followed the Estes' operation.

Von Graff charted the results of plastic operations. He showed that pregnancy may follow in about 10 per cent but that pregnancy is likely to reach term in only one-third of them; abortion or ectopic pregnancy being twice as frequent.

Greenhill analyzed questionnaires sent gynecologists in America. About 818 plastic operations were reported with 54 pregnancies following these operations, which is one pregnancy for every 15 operations (66 per cent). Thirty-six live babies were delivered, or one baby for every 22.5 operations (4.4 per cent).

Results of a questionnaire reported by Solomons gave the opinion of some of the outstanding gynecologists in the world. Some never operate on fallopian tubes. Some operate only on fimbriated extremities. Some operate on all portions of the tube. The average percentage of successes after operation is about 10.

The cases amenable to plastic operations on the fallopian tubes represent a very small, carefully selected group. Before any major surgical procedure is done the following facts should be taken into consideration:

1. The woman must be in childbearing age.
2. Her general physical condition must be amenable to pregnancy. Any old infection must be removed.
3. The glands of internal secretion should be functioning within reasonable bounds of normal.
4. Definite occlusion of both tubes must be determined.
5. Fertility of husband must be proved.
6. Preoperative prognosis should be guarded.

It is essential in these operations to practice gentleness in handling tissue and separating adhesions. Preservation of the blood supply to the ovaries is necessary. If the uterus is retroverted, proper suspension should be done. Dilatation of the cervix may be advisable.

Summary

1. The importance of correct diagnosis is stressed.
2. Many patients with anatomic abnormalities and mechanical obstruction of the uterine canal can be relieved by simple treatment.
3. Endocrinologic dysfunction may be and frequently is the cause of sterility. Organo-therapy offers substantial assistance in the management of cases of this type.
4. Surgery of the fallopian tubes is briefly discussed and its doubtful results emphasized.

REFERENCES

1. Solomons, B.: Conservative Treatment of Pathologic Conditions of the Fallopian Tubes, J. Obst. & Gynaec. Brit. Emp. 43:619 (Aug.) 1936.
2. Greenhill, J. P.: Evaluation of Salpingostomy and Tubal Implantation for Treatment of Sterility, Am. J. Obst. & Gynec. 33:39-51 (Jan.) 1937.
3. Schultze, G. K. F.: Curative Action of Iodized Oil Filling of Uterus and Tubes in Sterile Women, Zentralbl. f. Gynak. 58:180 (Jan. 20) 1934.
4. Greene, E. H., and Pendergrass, R. C.: Injection of Uterus and Fallopian Tubes with Iodized Oil (Lipiodol) as an Aid in Diagnosis: Roentgenological Study of Cases, J. M. A. Georgia 16:401-407 (Dec.) 1927.
5. von Graff, E.: Operative Treatment of Female Sterility: Tubal Implantation, J. Iowa M. Soc. 26:31 (Jan.) 1936.
6. The Year Books of Obstetrics and Gynecology 1933-41 have been quoted liberally in this paper.

Discussion on Paper of Dr. Edgar H. Greene

Dr. O. R. Thompson (Macon): The rising tide of sterile marriages merits our serious consideration, be-

cause of the universally decreasing birth rate, a condition so prevalent, so undesirable and so threatening to society through its effect on family life, warrants close scrutiny and practical application of treatment and correction, such as that brought out by the essayist.

There are three essentials for every conception: normal spermatozoa, a normal ovum, and a normal pathway permitting fertilization and implantation. Thus, the factors inimical to conception fall into two major groups: those interfering with normal gonodal activity and those serving as obstructive lesions, either by preventing the union of spermatozoa and the ovum or by interference with the nidation of the fertilized ovum.

For a systematic study of those conditions amenable to treatment in the sterile female, five factors must be thoroughly investigated: (1) grossly recognizable pelvic conditions, such as tumors and infections inimical to initiation and maintenance of pregnancy; (2) cervical factor, which includes both hostility of the cervical secretions and failure to inseminate the cervix; (3) tubal factor, which may be either partial or complete occlusion of the fallopian tubes; (4) endocrine factor in the female, which includes abnormalities of the menstrual rhythm and the absence of a properly prepared endometrium, and (5) the final factor which finds expression in either relative infertility or absolute sterility and is recognized by semen examination.

The finding of congenital abnormalities, pelvic tumors or chronic inflammation of the generative organs, prohibits further investigation until the condition disclosed has been corrected by proper measures. Double vagina has not apparently been any great sterility problem in my experience, because the only three patients that have come under by observation were pregnant when the condition was found. Two of the patients had to be delivered by section, and the third has delivered twice spontaneously. Small subserous fibroids offer no impediment to conception or delivery. They usually grow rapidly during pregnancy and unless there is some interference with the circulation they decrease in size rapidly during the puerperium. The submucous or intramural fibroid may interfere with nidation and development of the ovum and should be removed by myomectomy before pregnancy is advised.

If there is no other discernible cause for the sterility and there is a history of previous pelvic inflammation with or without pelvic adhesions, with the absence of endocrine stigmas in the amenorrheic woman, the resection of cysts from the ovaries, taking care to leave all normal ovarian tissue, will occasionally be followed by improvement in menstrual function and pregnancy.

The retroverted uterus with its fundus resting deep in the pelvis and the cervix pointing directly behind the symphysis can certainly be a factor in the prevention of conception. The change in the usual position of intercourse, allowing the ejaculated semen to come in direct contact with the cervix, will often meet with success. Also the correcting of the position by a well-fitting pessary, causing the cervix to point backward into the seminal pool after ejaculation, will also occasionally prove successful. Intubation of the cervix with the husband's semen as recommended by the essayist should certainly be tried before the patient is subjected to an abdominal operation for correcting of the retroversion.

Infections of the cervix with the usual associated polypoid degeneration and inimical discharge are probably our greatest causes of secondary sterility. For a successful elimination of the chronic infection, cauterization and conization are the methods of choice. Care should be taken in using the actual cautery and the treatments should be followed in several weeks by the passage of the uterine sound to avoid cervical stenosis. In the extensively involved cervical canal the conization operation should be used. This procedure is less likely to be followed by fibrosis and stenosis.

Tubal insufflation and visualization are a great help in proving the patency of the tubes. They are considered safe procedures but should not be done until all other factors that might influence conception have been eliminated. Plastic surgery on the occluded tube offers such a small percentage of success it seems hardly justifiable on any portion except the fimbriated end.

The results I have obtained from endocrine therapy in the treatment of sterility have not been as encouraging as the reports from some of the large clinics indicate. In those cases, when ovarian failure is of a mild degree, the use of anterior pituitary extract has been encouraging, but in those instances in which there is marked hypoplasia and the failure of ovulation is associated with infertility, my results with any form of endocrine therapy have been discouraging. It is entirely possible that what little success I may claim for endocrine therapy in female sterility is in reality a result of the patient's spontaneous solution of her own endocrine difficulties.

The clinical relationship which hypothyroidism bears to sterility, miscarriage and habitual abortion has been recognized and should never be overlooked in the treatment of sterility.

The husband is a factor in any sterile mating and should be considered early in any systematic study. Though physically fit and sexually powerful, he may be absolutely sterile and should be considered as such until proved otherwise.

WAR RATIO OF MALE TO FEMALE BIRTHS

The normal proportion of male births over female births was even greater in every European belligerant power during the last years of World War I and for perhaps two or three years afterward, *The Journal of the American Medical Association* for November 22 says in answer to an inquiry.

"The proportion of male births increased also in many of the important European neutral countries," *The Journal* continues, "including Norway, Sweden, the Netherlands and (for the year 1920) Switzerland. There was an observable rise in Australia, but not in the United States or in New Zealand, among the non-European belligerents. The increase in the proportion of male births, where observed was of short duration."

As for the reasons for this increase, *The Journal says* that "A simple explanation that seems entirely adequate has not yet been offered."

NEPHROPTOSIS

Pyelographic Study, Clinical Features and Surgical Treatment

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The problem of the correct management of nephroptosis has been one with which urologists have been concerned for many years. The fact that one or both kidneys are ptosed is no indication that medical or surgical intervention should be undertaken. One must rely mainly upon the subjective symptoms directly resulting from the ptosed kidney and whether these symptoms are associated with definite renal or ureteral pathologic changes. If the suspected kidney is associated with marked angulation and obstruction of the ureter, or with a persistent hydronephrosis, operative treatment is definitely indicated. Symptoms caused by these pathologic lesions unquestionably compel the patient to seek relief, and it is only after a careful urologic study that the etiologic or contributory factor is discovered. It was surprising to learn that in our recent series of forty patients observed in the Urologic Department of the Grady Memorial Hospital, Atlanta, one-fourth had previously been operated on for various abdominal lesions without obtaining relief from their distressing symptoms. Had a careful urologic study been undertaken a considerable number of these operations could have been avoided. These patients have a peculiar build and constitutional make-up. Many are regular visitors to our medical and surgical clinics, and are looked upon as neurotic individuals with imaginary symptoms.

Females are more susceptible to this condition than males, due to (1) broad shallow renal fossa, (2) laxity of abdominal muscles, (3) pregnancy, (4) improper dress, and (5) malnutrition. Trauma may be a contributing factor. The longer renal pedicle and the presence of the liver probably account for the greater involvement on the right side. The kidneys from an anatomic standpoint are predisposed to increased mobility which, in many instances, may become extreme. They are supported in their usual position by (1) the renal pedicle, which comprises the renal vessels and nerves; (2) fatty capsule and surrounding fascia, (3) peritoneum, (4) adrenals and their blood supply, and (5) intra-abdominal pressure, dependent upon the musculature of the abdominal wall and back. A fatty capsule (Gerota's capsule) consisting of a mass of loose adipose tissue surrounds the kidney and acts as a protective mechanism toward external injury. This capsule is surrounded by a loose sheath of fibrous tissue, known as perinephritic fascia (Gerota's fascia). Since these layers of fascia fuse above and remain separated near the lower pole of the kidney, the natural tendency of a movable kidney is to follow the path of least resistance, which is downward toward the pelvis. This downward displacement may be accelerated by any of the factors already enumerated.

During our urologic investigations we have observed numerous instances of ptosed kidneys that caused no symptoms at all. On the other hand, the relatively sound kidney may be the one at fault. A careful urologic examination is essential for a correct diagnosis and interpretation of the laboratory and pyelographic findings. One can readily understand the pathologic changes encountered when a kidney descends from its normal location into the lower abdomen or pelvis. With the descent of the kidney there is a pull on the renal vessels and nerves causing the vessels to become elongated and their lumens narrowed. As a result torsion of the pedicle may occur with subsequent obstruction. This condition, when present, is accompanied by severe pain, vomiting and collapse. Intermittent attacks of hematuria may result from the sudden kinking of the pedicle. In other instances the pedicle may become constricted and its blood sup-

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FIG. 1

Pyelogram of a congenital ectopic rt. kidney. This condition is often confused with true nephroptosis and is the result of the failure of the kidney to ascend to its proper position in foetal life. It is often associated with abnormal rotation, abnormality of the blood supply and hydronephrosis.



FIG. 2

Typical appearance of patient with nephroptosis. The majority are emaciated, dyspeptic, nervous, long-waisted with a pendulous abdomen.

ply altered to such a degree as to cause marked engorgement of the kidney.

Intermittent blocking of the urinary outflow may occur following angulation of the ureter. This may give rise to hydronephrosis of a transient character. In addition, urinary stasis followed by bacterial invasion and inflammation add to the annoying symptoms already present. As a result of the inflammatory process the kidney or ureter, or both, may become adherent to adjacent structures. Ureteral strictures may develop which, in some instances, may make difficult the passing of a catheter. If there is obstruction to the venous return, pyelitis, chronic nephritis and pyelonephritis may develop. In these patients renal function will be diminished and their blood will show an increase in nitrogenous products. Adhesions between the kidneys and adjacent organs, e. g., peritoneum, duodenum, transversalis fascia, colon or liver, may take place. This is due to gradual atrophy of the fatty capsule which is replaced by fibrous tissue bands. Consequently when the kidney begins to descend, traction is made on these organs, causing severe dyspeptic symptoms to develop. Ptosed kidneys are occasionally accompanied by aberrant vessels at the ureteropelvic junction which should be ligated and cut, if there is any interference with pelvic drainage. A low kidney may exert pressure over the ovary, bladder or uterus, giving rise to additional pelvic or urinary symptoms.

Symptoms

The symptoms depend entirely upon the degree of ptosis and the extent of the pathologic changes present. As has already been mentioned, a low kidney may be the contributory factor in torsion of the pedicle, ureteral angulation and stricture, pyelitis and hydronephrosis in addition to other pathologic lesions. Consequently, a chain of subjective symptoms may follow which will be in direct relation to the parts involved. The chief symptoms present are renal pain, gastro-intestinal, urogenital and nervous manifestations. The pain is de-

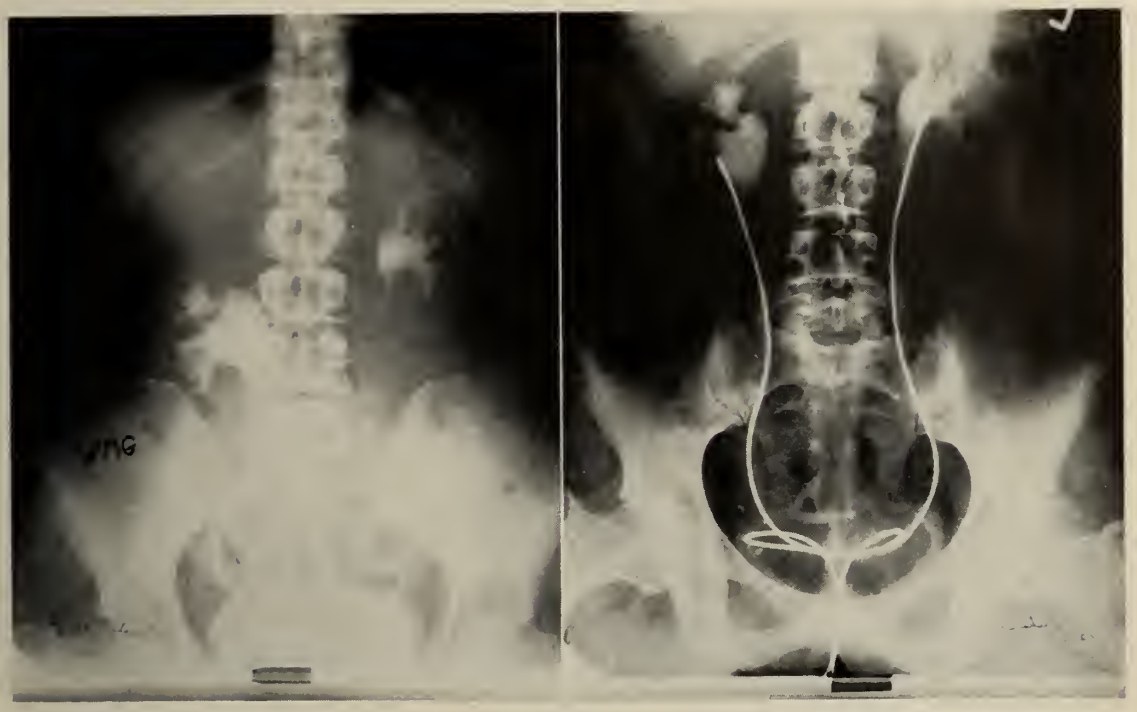


FIG. 3a

Preoperative pyelogram, female, age 35. Chief symptoms, pain in rt. lumbar region, hematuria, frequency and dysuria of short duration. Culture positive for E. Coli from rt. kidney and E. Coli with staph. albus from left. Note marked ptosis of rt. kidney associated with dilatation of pelvis, and ureter with ureteral angulation.

FIG. 3b

Postoperative pyelogram. Kidney in excellent position following nephropexy. Urinalysis and culture neg. Some dilatation of renal pelvis still present. Condition greatly improved.

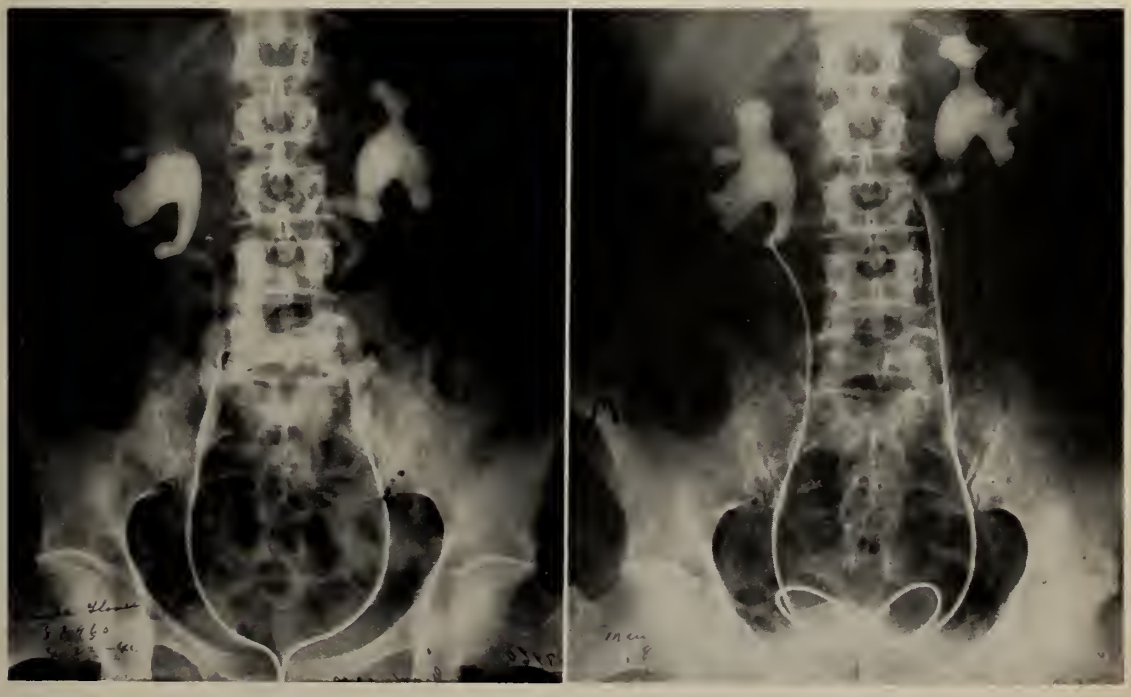


FIG. 4a

Preoperative pyelogram, female, age 57. Chief symptoms, pain in rt. side and back radiating to lower abdomen and extremities, burning on urination, occasional attacks of chills and fever. Duration, fourteen months. Note marked angulation and dilatation of upper ureters, and dilatation of renal pelves and calices. Right nephropexy advised.

FIG. 4b

Postoperative pyelogram. Following nephropexy, rt. kidney in good position. Ureter freed of adhesions, and straightened to promote proper drainage. Dilatation of upper and lower calices still present. Symptoms much improved.



FIG. 5a

Preoperative pyelogram. Male, age 55. Chief symptoms, constant pain in rt. lumbar region, hematuria and nocturia. Duration, one year. Culture, rt. neg., left strep. fecalis. Note marked ptosis of rt. kidney and tortuosity of rt. ureter.



FIG. 5b

Postoperative pyelogram. Kidney in excellent position following nephropexy. Culture and urinalysis, neg. No subjective symptoms.

scribed as a dragging, dull, aching discomfort in the upper abdomen or loin. It may be acute with a sudden onset, or of the intermittent type, and may *not* be associated with a gastro-intestinal complaint. The pain usually has a tendency to radiate toward the suprapubic, inguinal, sacral or coccygeal regions. In our series of patients pain was present continuously or intermittently in twenty-three. Due to the presence of renal stasis, calculi may develop giving rise to additional symptoms. Calculi were present in four of our patients. On the other hand, the presence of a ureteral stricture, pyelitis, or traction on an adjacent organ may complicate the clinical picture. Symptoms referable to the urinary tract were present in thirty-two patients. Bladder discomfort was present in twenty-five patients and was characterized by a burning, scalding sensation, dribbling and other evidence of cystitis. The presence of ureteral stricture, angulation or torsion, may cause a blockage with symptoms simulating that of a calculus. The attack may last for hours and is often accompanied by an occipital headache or migraine. Albumin, casts and red blood cells may be present in the urine if nephritis develops. Frequency of urination, nocturia and dysuria are noted in a large percentage of the cases. Pus is present in the urine of patients that develop a pyelitis or pyelonephritis. A ptosed kidney with obstruction generally predisposes to bacterial invasion which may persist for a long period of time in spite of nephropexy and chemotherapy. There were twenty-five positive cultures of the urine in our forty patients, caused by the following predominating organisms: colon group, staphylococcus aureus, streptococcus fecalis and bacillus proteus. Seventeen patients had positive cultures from both of their kidney specimens while eight patients had positive cultures from one of their kidney specimens.

Due to continuous pain, gastro-intestinal and urinary symptoms, the patients develop various forms of neurosis which do not respond to the usual methods of treatment. In our large clinics they are referred by the visiting physicians from one department to another and when finally they reach the urologic department, the chart that accompanies them resembles the family Bible.



FIG. 6a

Preoperative pyelogram. Female, age 30. Chief symptoms, frequency of urination, burning and hematuria. Duration, 6 weeks. Culture rt. B. coli., left neg. Note ptosis of rt. kidney with tortuosity and angulation of rt. ureter, dilatation of upper and lower calices and pelvis.



FIG. 6b

Postoperative pyelogram. Following nephropexy, kidney well elevated in proper position. There is still some dilatation of upper calix and pelvis. Culture still positive. Absence of subjective symptoms.

They are thin, dyspeptic, long-waisted individuals with cold, clammy hands, often complaining of insomnia and palpitation. They tire easily, are toxic and suffer from dizziness. Symptoms referable to the gastrointestinal tract are rather common. Distention, nausea, vomiting, hyperacidity and constipation occur frequently and are attributed to traction of the movable kidney on the duodenum, colon or mesenteric vessels. The occasional occurrence of jaundice is attributed to traction on the second portion of the duodenum or on the common bile duct.

Diagnosis

The diagnosis of a floating kidney necessitates a complete physical and urologic examination. In many instances the lower pole of the kidney, if freely movable, can be palpated at the end of inspiration. This is accomplished by placing the fingers of the left hand in the flank under the twelfth rib and the angle between this rib and the erector-spinae muscles. The thumb of the left hand is pressed into the lateral wall of the flank, while the fingers of the right hand are placed over the kidney on the abdominal wall. If the kidney is movable it can be palpated at the end of inspiration, as a smooth rounded body slipping up into the abdomen. An extreme movable kidney can be grasped between the two hands. An exact diagnosis can always be made by a careful urologic examination, particularly bilateral pyelograms of both the recumbent and erect positions. If carefully done there is no contraindication to making studies of each kidney, including pyelogram at the same sitting. This will enable one to determine whether the ptosis is unilateral or bilateral, and whether ureteral angulations, strictures or other pathologic lesions are present. The urologist must be able to evaluate the clinical symptoms and their relation to the pathologic findings. In some patients extreme renal mobility may give practically no symptoms, while other kidneys that are slightly movable may cause severe symptoms. In addition to making the pyelograms, a routine cystoscopic examination including a careful examination of the bladder and collection of specimens



FIG. 7a
Preoperative pyelogram. Female, age 30. Chief symptoms, severe pain in rt. side and back of a colicky nature, and nocturia. Duration, two years. Note the embryonic type of kidney and the complete loop formed by upper ureter.



FIG. 7b
Postoperative pyelogram. Following operation, kidney in excellent position. Ureter free of adhesions and straightened to promote better drainage. Subjective symptoms markedly improved.

from each kidney for chemical, microscopic and bacteriologic examination should be carefully done. The presence of a ureteral stricture should be carefully noted. It is also important to perform a renal function test, blood chemistry determinations and a complete blood count, particularly if operation is contemplated. If the ptosed kidney is complicated by pyelonephritis, or hydronephrosis, renal function will be diminished.

Our usual procedure is to make four plates: a plain x-ray, and a retrograde pyelogram (15 per cent Skiodan solution) in the prone position, and one in the semierect position, followed by another exposure after a lapse of five minutes. The final picture will show whether there is retention of the Skiodan in the renal pelvis, due to poor drainage.

A number of urologists advocate intravenous pyelography for the diagnosis of ptosed kidneys, but we are convinced that much disease may be overlooked with the intravenous method. As a postoperative check-up this method has its advantages.

Treatment

The results obtained in the management of floating kidneys depend in a great measure on the proper selection of cases. If the examination discloses a mild or moderate degree of ptosis with no evidence of serious pathologic changes, conservative treatment should be employed. Our chief aim is to improve the general health of the patient. The application of a proper belt or support, increasing the weight, rest in bed, massage, etc., are valuable adjuncts. Mechanical supports will give the patient symptomatic relief, but a permanent cure cannot be expected.

Nephropexy is indicated if the patient continuously complains of distressing symptoms and the urologic examination reveals a ptosed kidney associated with rotation, ureteral kinks, strictures, or hydronephrosis; in short, pathologic lesions which interfere with proper kidney drainage. The surgical technic employed matters little so long as the kidney is subsequently retained in its proper location and pathologic lesions, if present, are corrected. There is considerable variation in the technic and a variety of operations for nephroptosis. Among them are (1) suspension of the kidney by transfixion sutures through the parenchyma; (2)

TABLE 1 CLINICAL FEATURES, AND RESULTS OBTAINED IN 40 CASES OF NEPHROPTOSIS FOLLOWING NEPHROPEXY

No.	*Chart*	*Age*	*Sex*	*Symptoms and Duration*	*Laboratory*	*Time Hosp.*	*Treatment*	*Remarks*
1	A19393	25	F.	Intermittent pain rt flank radiating to rt groin. 6 mos.	Urine neg. X-ray — nephroptosis with hydronephrosis. Right.	13 days	Nephropexy rt suspension of kidney over 12th rib.	Unable to locate patient.
2	A6240	36	F.	Frequency, burning, pain in back. Mass in side. 1 year.	Pos. cul for diplococci and bacilli. X-ray dilat. of renal pelvis consistent with pyelitis.	11 days	Freeing of adhesions. Rt. Nephropexy. Sutures carried above 12th rib.	Cu. neg. No pain present. Pyelonephritis persistent in both kidneys.
3	A9961	30	F.	Pain rt side, back and flank of colicky nature. Nocturia. 2 years.	Urine—pus and blood. X-ray—ptosis of rt kidney.	13 days	Rt. nephropexy.	Improved. X-ray—kidney in good position.
4	A22084	26	F.	Severe pain in lf side radiating to genitals. Hematuria, frequency. 10 mos.	Urine cul. Gram pos. Cocci. X-ray —dilat. of lf renal pelvis and ureter. Small pelvic stone.	29 days	Lf. nephropexy. Suture above 12th rib and nephrolithotomy.	Patient improved. Cul. neg. following two mos. treatment.
5	A24985	25	F.	Pain in rt flank to groin. Gastric symptoms. Frequency and back pain. 1 mo.	Urine cul. rt—E. coli. Lf. coli. and diplococci. X-ray—ptosis rt kidney and dilatation of ureter.	12 days	Freeing of adhesions around ureter and kidney. Fixation of kidney above 12th rib.	Cul. neg. Patient has made excellent recovery. X-ray—kidney in good position.
6	A25349	36	F.	Pain in lf lumbar region. Frequency of urination. 6 years.	Urine cul. bacilli and diplococci. X-ray—bilateral nephroptosis.	10 days	Lf. nephropexy with suspension above 12th rib and sympathectomy.	No pain in lf kidney. X-ray—kidney in good position. Cul. neg.
7	A20705	35	F.	Severe pain in rt back and flank. Gastric distress. Chills and fever. 1 mo.	Pus and cocci in urine. X-ray—ptosis first degree with hydronephrosis.	14 days	Freeing of adhesions and nephropexy on rt above 12th rib.	No pain. Gained five lbs. Cul. still pos.
8	A2684	45	F.	Pain rt and lf flank and groin. 1 year.	Urine cul. Gram.+diplococci from rt and lf. Bilat. ptosis and hydronephrosis.	12 days	Rt. nephropexy. Sutures above 12th rib. Lf. nephropexy 6 mos. later.	Kidney in good position. No pain in rt kidney region.
9	A21312	52	F.	Dietl's Crisis 3 attacks. Similar attacks both sides. 4 years.	Urine pus present. Bilat. ptosis and hydronephrosis.	15 days	Rt. nephropexy with sutures above 11th rib.	Rt greatly improved. Some pain lf side. Rt kidney now in good position.
10	A17935	34	F.	Indigestion, nervous, pain in rt flank and groin. 10 years.	Urine Alb. 1+ micro. blood. Small painful hydronephrosis. No ptosis.	13 days	Freeing of a capsule over ureter and fixation over 12th rib on rt side.	Improved. No pain present. Still nervous.
11	A1045	24	F.	Burning, frequency, pain in rt side and back. 3 or 4 years.	Pos. cul. for coli. and staph. aureus. Tortuosity of rt ureter. No ptosis or hydronephrosis.	10 days	Freeing of adhesions and fixation of kidney above 12th rib on rt side.	No pain or urinary symptoms present. Cul. neg. after 5 mos. treatment.
12	A19056	24	F.	Pain in rt side and groin. 6 mos.	Urine neg. Except Tr. of Alb. X-ray slt. ptosis rt. kidney with tortuosity.	10 days	Freeing of adhesions from ureter and kidney with fixation above 12th rib.	X-ray—shows kidney in good position.
13	A29803	23	F.	Intermittent pain over lumbar region radiating to rt inguinal region. 2 years.	Urine neg. X-ray—sl. hydronephrosis on rt with stricture distal to ureteral pelvic junction.	22 days	Rt nephropexy. Freeing of adhesions. Sympathectomy. Sutures placed over 11th rib.	Good results. Kidney in excellent position.
14	A15860	45	F.	Frequent urination. Chills and fever. Pain in rt flank. 2 wks.	Urine cul-rt Strep. hemolyticus. X-ray—tortuosity both ureters with rt kidney showing rotation and ptosis.	16 days	Rt nephropexy. Sutures above 11th rib.	Patient seen and X-rayed by private physician. X-ray—kidneys in normal position.

TABLE 2 CLINICAL FEATURES, AND RESULTS OBTAINED IN 40 CASES OF NEPHROPTOSIS FOLLOWING NEPHROPEXY

No.	*Chart*	*Age*	*Sex*	*Symptoms and Duration*	*Laboratory*	*Time Hosp.*	*Treatment*	*Remarks*
15	A15943	29	F.	Pain in rt flank. Growing worse. Tenderness rt flank. 2 years.	Micro. urine. Blood and ep. cells numerous. X-ray—rt kidney well below crest of ilium with ptosis and rotation.	11 days	Rt nephropexy. Suspension of kidney above 12th rib.	Good results. X-ray—no evidence of previous rotation and ptosis.
16	A22661	47	F.	Nocturia, burning and difficult urination. Several years.	Urine neg. X-ray—on rt sl. ptosis and hydronephrosis of rt ureter. Delay in drainage time.	13 days	Rt nephropexy. Suspension of kidney above 12th rib.	Much improved. X-ray—kidney in good position.
17	A18937	24	F.	Constant pain in rt flank. Hematuria for 2 years.	Alb. 2 + Bact. + Crystals + Occa. W. B. C. X-ray—rotation and ptosis of rt kidney with sl. hydronephrosis.	13 days	Rt nephropexy. Kidney damaged and shows signs of peri-nephritis.	X-ray—Kidney in good position.
18	A21778	42	F.	Pain in rt side, frequency and burning, fever. 1 mo.	Cul. gm. + Cocci on rt. No growth on lf. X-ray—Bilat. ptosis and sl. dilat. of lf ureter.	19 days	Rt nephropexy with sutures above 12th rib. Check-up shows kidney in normal position. Sympathectomy.	Pt. improved. Strep. fecalis still in rt kidney. Rt kidney in normal position.
19	A25017	29	F.	Chills, fever, pain lf kidney and flank. Dysuria, frequency, nausea, vomiting. 1 mo.	Cul. lf-prot. ammoni. B. aerogenes. Rt neg. X-ray—enlarged rt kidney and dilat. of renal pelvis. Small stone.	16 days	Lf nephropexy. Unable to locate stone.	Good results, no pain. Kidney in good position. Cul. neg. on 2 occ. X-ray—no stone. Pt. on acid ash diet.
20	A24279	48	F.	Acute pain rt side radiating to groin. Burning and frequency, nausea and vomiting. Hematuria. 6 years.	Urine cul. B. Coli. X-ray—ptosis and Hydronephrosis of rt kidney.	13 days	Fixation of rt kidney above 12th rib.	Kidney in good position with no infect. Present time, some pain over scar.
21	A22243	50	F.	Pain in lf side. Burning and frequency of urination. 1 year.	Urine neg. X-ray—Ptosis with hydronephrosis on rt side.	9 days	Rt nephropexy. Sympathectomy.	Pt. still complains. X-ray—kidney in normal position.
22	A25322	61	F.	Pain in rt side radiating to abdomen. Dysuria and frequency. 10 years.	Urine — both kidneys coli. and gram pos. cocci. X-ray—bilat. ptosis and angulation on rt.	12 days	Rt nephropexy. Sympathectomy.	X-ray—rt kidney in good position. Some pain in rt. flank. Cul. neg.
23	A11707	39	F.	Dysuria, nocturia. Pain in back and rt flank. Distention of abdomen. 8 years.	Pus in urine. 2 + alb. X-ray—ptosis of rt kidney with hydronephrosis.	15 days	Fixation of rt kidney above 12th rib.	Patient much improved. Urine neg. and kidney in good position.
24	A23900	57	F.	Pain in rt back radiating to rt thigh. Hematuria. Gastric disturbances. Chills and fever. 14 mos.	Urinalysis—pus and blood. X-ray—Ptosis and stone in rt kidney.	27 days	Right nephrolithotomy with fixation above 12th rib.	Improved.
25	A25923	28	F.	Pain in rt kidney region. Hematuria, vomiting, fever. 3 weeks.	Urine—pos. cul from each kidney. X-ray—kinking and angulation rt kidney. Embryonic type of kidney.	14 days	Rt nephropexy with sutures above 12th rib. Short pedicle and abnormal type of kidney.	Good results. X-ray—kidney in good position. Cul. neg.
26	A42163	33	F.	Backache, painful urination, nocturia. 3 weeks.	Urinalysis — tr. alb. Cul. — Rt. staph. aureus. Lf staph alhus. X-ray—Marked ptosis on rt with tortuosity and angulation of ureter.	13 days	Rt nephropexy. Fixation above 12th rib.	After 2 mos. treatment kidney in good position. No ptosis evident. Cul—Rt. neg. Lf. E. coli. Condition improved.

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TABLE 3 CLINICAL FEATURES, AND RESULTS OBTAINED IN 40 CASES OF NEPHROPTOSIS FOLLOWING NEPHROPEXY

No.	*Chart*	*Age*	*Sex*	*Symptoms and Duration*	*Laboratory*	*Time Hosp.*	*Treatment*	*Remarks*
27	A40122	39	F.	Cramping pain rt lumbar reg. radiating into rt groin. Burning, nocturia, scalding, no control of stream. 6 wks.	Urine — neg. Cul. neg. X-ray — Ptosis of rt kidney with stones.	18 days	Right Nephropexy and Nephrolithotomy with freeing of adhesions.	After 2 mos. treatment condition good. No stone evident. Cul. neg. Condition improved.
28	A3447	29	F.	Pain rt kidney region and back. Acute pain upon urination. Nocturia, dysuria, nausea and vomiting. 5 mos.	Urine—neg. Cul. neg. X-ray—ptosis of rt kidney.	15 days	Rt. nephropexy. Suspension above 12th rib.	After 3 mos. treatment kidney still in proper place but cul. still positive on lf. Rt. neg. Trichomonas evident. Condition improved.
29	A38442	36	F.	Frequency of urination. Hematuria, dull pain lumbar region. Incontinence when standing. Nocturia, marked cystitis. 2 mos.	Urinalysis—Pos for blood. Cul.–4 col. staph albus, rt staph aureus, left. X-ray—Bilat. ptosis more marked on rt with angulation of ureters. No dilat. noted on either side.	16 days	Rt nephropexy. Fixation above 12th rib. Sympathectomy.	Kidney in good position. Urine—neg. Cul—Rt and lf pos. after 2 mos. Condition improved.
30	A40937	46	F.	Pain, burning, constant urination. 6 mos.	Urine—alb. and sugar tr. Cul.—Rt neg., lf strep hem. X-ray—Marked ptosis on rt.	18 days	Rt nephropexy. Freeing of adhesions. Suspension above 12th rib.	After 6 weeks treatment kidney in good position. Cul. Rt and lf positive. Trichomonas. Condition improved.
31	A35516	43	F.	Dull aching pain in lumbar region. Marked burning on urination. Hematuria. 18 mos.	Urine—Occa. pus alb. tr. and Trichomonas. Cul—neg. X-ray—Bilat. ptosis. Mod. tortuosity of hoth ureters.	16 days	Rt nephropexy. Suspension above 12th rib. Penrose drain inserted.	After 3 mons. kidney in good position. Condition improved. Cul—Rt staph aureus, lf. neg.
32	A1554	30	F.	Frequency of urination, burning, hematuria. 6 weeks.	Urine—neg. Cul—Rt E Coli, lf neg. X-ray—ptosis rt kidney.	27 days	Rt nephropexy. Fixation above 12th rib. Penrose drain inserted.	Cul—pos. After 6 weeks kidney still in good position. Condition improved.
33	A22970	35	F.	Pain over rt kidney reg. Painful urination, hematuria, burning, dysuria. 3 days.	Urine—neg. cul—E coli on rt E coli & staph albus on lf. X-ray—marked ptosis on rt. Dila. of ureter and renal pelvis. Angula. of ureter.	19 days	Rt nephropexy. Fixation above 12th rib.	After 3 mos. ptosis is largely corrected. Condition apparently improved. Urine and cul. neg.
34	A3592	25	F.	Pain over both kidneys, more marked on rt. Nervous, sleeplessness, backache. Pain radiating to R L Q.	Urine—Pos. for bacteria, crystals, and WBC. Cul—rt staph albus Gm. pos. cocci. Lf—pos. Bacilli, diplococci. X-ray—Marked ptosis of rt kidney. Bilat. hydro-nephrosis with infec. and pyelovenous backflow. 6 mos.	21 days	Rt nephropexy. Fixation above 12th rib.	After 10 mos. kidney in excellent position and cul. neg. Condition improved.
35	A36344	39	F.	Pain in back and L L Q. Dysuria, nocturia, soreness in lower abdomen. Elevated temperature. 2 mos.	Urine—pos. for bacteria, crystals WBC rare. Cul—rt staph aureus, lf neg. X-ray—Sl. Bilat. ptosis with resulting angula. of both ureters.	20 days	Lf nephropexy. Fixation above 12th rib. Penrose drain inserted.	After 4 mos. kidney in moderately good position. Drainage sl. impaired. Cul. rt staph aureus and lf strep hem. Condition improved.

TABLE 4 CLINICAL FEATURES, AND RESULTS OBTAINED IN 40 CASES OF NEPHROPTOSIS FOLLOWING NEPHROPEXY

No.	*Chart*	*Age*	*Sex*	*Symptoms and Duration*	*Laboratory*	*Time Hosp.*	*Treatment*	*Remarks*
36	A40339	'36	F.	Pain in lf and rt lumbar reg. Burning and frequency. 3 wks.	Urine—Pos. for pus. Cul—rt staph aureus. Aerogen. lf staph albus. X-ray—Bilat. Hydro-nephrosis, dilated ureters and ptosis. More marked on lf.	23 days	Rt nephropexy. Sutured above 12th rib. Penrose drain inserted.	X-ray rt mod. hydronephrosis and mod. enlargement of kidney shadow. No ptosis rt. 3½ mos. after operation.
	Second Operation			3 weeks after operation, pt. returned to clinic with pain lf side upon sitting up. Sl. frequency. Path. Diag.: Hydronephrosis. Sl. chr. pyelitis and interstitial nephritis.	Urine—Occa. pus, ep. cells, occa. squamous. Cul—Rt—no growth, lf—staph aureus, few bacteria,+ crystals. Cnl—rt neg.	19 days	Lf nephrectomy. Following incision, renal pelvis found to be greatly enlarged and kidney tissue greatly diminished.	Path. of lf kidney spec. Kidney twice normal size. Measurement —12.5x3.5x5 cms. Weight—with flnid—330 grams. Weight without fluid—140 grams. Collapsed pelvis 7 cms. Circumference. Pelvis elongated. 7 cms. Capsule of kidney markedly thickened. X-ray rt. mod. hydronephrosis and mod. enlargement of kidney shadow. No ptosis rt. 3½ mos. after operation.
37	A40519	53	F.	Nocturia, b u r n i n g, frequency, worse on rt and when standing. Cystitis. 2 years.	Urine—WBC. occa. Crystals+bacteria. Cul—rt staph aureus. Lf—staph aureus. X-ray — Reveals marked bilat. ptosis, more marked on rt. Tortuosity of both ureters with sl. delay in drainage. Sl. dilat. of both pelves.	19 days	Rt nephropexy and fixation above 12th rib.	After 3 mos. check-up X-ray reveals no ptosis. Renal pelvis and ureters show little change since before operation. Urine—alb tr. WBC — occa. Blood — occa. Ep cells, rare squamous. Crystals+ Cnl. — rt staph aureus. Lf — no growth.
38	A19129	21	F.	Chills, fever, nausea, vomiting, pain over kidney region. More marked on rt. 1 week.	Urine—Ep cells—occa. Crystals+ WBC Cul — Rt & lf E Coli. X-ray—Bilat. hydronephrosis and hydroureter. Sl. narrowing in ureter on rt evidently result of stricture.	22 days	Rt nephropexy and fixation above 12th rib. Removal of bands and adhesions from rt ureter and ureteropelvic junction.	After 3 months retrograde pyelogram reveals bilat. hydronephrosis. Urine—crystals, and bacteria. Pos. cul—rt and lf—no growth. Kidney in good position. Condition unchanged.
				6 mos. after operation, patient fell and injured lf side. Has great pain over lf kidney region since, associated with burning, frequency, and much pain over rt kidney.	Urine—WBC, occa. ep cells, occa. squamous, crystals+. Cnl—rt & lf neg.		In clinic at this time rt ureter was dilated with difficulty with a No. 7 bougie to renal pelvis.	3 mos. after first check-up, pyelogram reveals the same stricture. There is still sl. dilat. of both pelves, however, the delay in drainage on rt is not as marked as last examination.
39	A8197	55	M.	Constant pain in rt side, hematuria, nocturia. 1 year.	Urine—Bacteria+crys.+Cul — rt neg. lf. strep fecalis. X-ray—reveals marked ptosis on rt and tortuosity of rt ureter. Drainage good. No hydronephrosis.	25 days	Rt nephropexy. Fixation above 11th rib. Penrose drain inserted.	Cul—neg. After 2 mos. X-ray reveals no ptosis. Appearance normal except for an anomalous no. of minor calyces.
40	A44036	52	F.	Dragging pain rt abdomen. Frequency and nocturia. 5 years.	Urine—neg. Cul—rt and lf neg. X-ray—marked ptosis and rotation of rt kidney. No hydronephrosis.	20 days	Rt nephropexy. Fixation above 11th rib.	Kidney in good position. Cul—neg. Condition improved.

TABLE II

SUMMARY OF RESULTS IN 40 CASES OF NEPHROPTOSIS IN WHICH NEPHROPEXY WAS PERFORMED

Total number of patients	40
Females	39
Males	1
Average age	37
Average number of days in hospital	17
Pain (continuous or at intervals)	23
Urinary symptoms	32
Gastro intestinal symptoms	9
Bladder discomfort	25
Right side involvement	36
Left side involvement	4
Bilateral Ptosis (not marked)	15
Bilateral Ptosis (marked)	6
Unilateral Ptosis	19
Hydro-nephrosis (mild to severe)	13
Operations on both kidneys	2
Hydro-ureter	2
Sympathectomy	6
Calculi present	4
Negative cultures	15
Positive cultures	25
Organisms encountered were as follows: gram positive diplococci, coli, staph. aureus, strep. hemolyticus, proteus ammoniae, b. areogenous, gram positive cocci, staph. albus, staph. hemolyticus, escherichium coli, and strep. fecalis.	
Bilateral positive cultures	17
Unilateral positive cultures	8
Right side	4
Left side	4
Definite improvement (particularly in reference to pain and urinary symptoms)	35
Condition unchanged (due to persistent hydro-nephrosis, infection, etc.)	5

use of flaps from the renal capsule; (3) hammock suspension of the kidney; (4) partial decapsulation with the kidney supported by gauze packed below until adhesions are formed; and (5) partial decapsulation and obliteration by sutures of the fascial pocket into which the kidney descends. A very popular operation recently devised by Lowsley,[8] and which has proved successful, makes use of chromicized ribbon-gut.

Our usual method in performing nephropexy consists of placing two or three U-shaped sutures through the capsule on its posterior aspect, taking a portion of the parenchyma in each bite. Before placing the sutures the fatty capsule is stripped off the entire posterior surface of the kidney and upper pole and a careful inspection of the pelvis and ureter is then made. The latter must be free throughout its entire length and in proper physiologic relation to the renal pelvis. The upper suture is passed in a triangular manner through the kidney capsule at the junction of its upper and middle thirds. The ends, which are left long, are directed upward to be tied over the eleventh or twelfth ribs. The middle and lower sutures are brought through the capsule at its middle and lower thirds respectively, and directed laterally toward the lumbar muscles. The kidney is then elevated as high as possible by an assistant while the upper sutures are tied snugly. The free ends of the middle and lower sutures are then fastened to the outer border of the lumbar muscles. One must be careful not to include the first lumbar nerve in the suture. This nerve is readily found and should be pushed downward. No. 3 chromic or No. 10 heavy braided silk sutures are recommended. It is important to keep the patient in bed in a Trendelenberg position sufficiently long to obtain proper kidney fixation. Following dismissal from the hospital the patient should be directed to return from time to time for a check-up. In many of the cases positive urinary cultures persist and it is, therefore, important to see that the urinary tract drains freely, and that the patient is given the benefit of chemotherapy. It is interesting to note that among our patients only five continued to complain of symptoms which were attributed to pyelitis, hydronephrosis or persistent renal infection, in spite of proper kidney fixation.

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REFERENCES

1. Arnold, C. H., and Gibson, L. V.: Treatment of Nephroptosis, Southwestern Med. 23:35-38 (Feb.) 1939.
2. Birdwell, J. C.: Symptomatology, Pathology and Treatment of Ptosis, J. Urol. 35:135-155 (Feb.) 1936.
3. Bumpus, H. C.: When Is Nephropexy Justified? Urol. & Cutan. Rev. (July) 1937.
4. Cabot, Hugh: Modern Urology, Philadelphia, Lea & Febiger. 2:461-484.
5. Church, C. R.: Review of Literature and Analysis of Paliative or Operative Treatment in 255 Cases of Primary Nephropexy, Am. J. Surg. 34:41-46 (Oct.) 1936.
6. Henline, R. B., and Bray, J. L.: Value of Serial Pyelograms in Nephroptosis, J. Urol. 38:620-633 (Dec.) 1937.

7. Herman, Leon: The Practice of Urology, Philadelphia, W. B. Saunders Company, 179-188.
8. Lowsley, O. S.: Advances in Surgery with Particular Reference to Nephropexy, J. Missouri M. A. 32:313-316 (Aug.) 1935.
9. Mathes, C. P.: Present Day Status of Nephropexy and End Results in 384 Operative Cases, Urol. & Cutan. Rev. 41:772-779 (Nov.) 1937.
10. McKim, C. F.: Nephropexy, West Virginia M. J. 35:153-158, (April) 1939.
11. Orr, Louis: Clinical Considerations of the Movable Kidney, J. M. A. Georgia. 23:82-86 (May) 1934.
12. Pennington, J. C.: Painful Nephroptosis and Its Treatment. 36:43-45 (July) 1939.
13. Sinkoe, S. J.: The Value of Pyelography in Urological Diagnosis, Urol. & Cutan. Rev. 29:79-83, 1925.
Abdominal Pain. Importance of Urological Investigation. J. M. A. Georgia, 1929.
Diagnostic Importance of the Pyelogram in Chronic Abdominal Conditions, J. M. A. Georgia, 15:48-52, 1926.
Hematuria. Urol. & Cutan. Rev. 34:906-1927.
Local Anaesthesia in Urological Surgery. Clin. Med. & Surg. (Dec.) 1927.
14. Woodruff, S. R., and Milbert, A. H.: Roentgenographic Studies of the Urinary Tract, J. A. M. A. 3:1607-1611 (Oct. 29) 1938.

SUPPURATIVE PROCESSES IN AND AROUND THE KIDNEYS

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In considering infections in and around the kidneys I wish to exclude those caused by the tubercle bacillus, as this type of infection alone would require the entire period to discuss amply. I also wish to exclude such conditions as acute and chronic nephritis, as I feel that these are problems for the internist rather than the urologist. I wish to put more stress on surgical inflammation of the kidneys; in other words, such involvement as abscesses of the kidney, pyelonephritis, pyelitis and pyonephrosis. When the pelvis alone is infected, one usually refers to this condition as pyelitis. With involvement of both kidney and pelvis one speaks of pyelonephritis, and when one gets a complication of pyelitis or pyelonephritis by obstruction to the outflow of urine then the kidney becomes distended with pus and urine and a pyonephrosis develops.

To cover the etiologic factors of renal infections one must mention a variety of bacteria. If one can tell the exact organism involved, the method of clearing the involvement is rendered much easier. Although it has been generally conceded that the colon bacillus is the most frequent cause of bacterial infection of the kidney, there has been quite a difference of opinion among urologists relative to the order of the frequency of other organisms. In studying the results of cultures of urine in the different clinics and hospitals over the country, I find that the percentage of colon infection ranges from 60 to 90 per cent. In female children, and in pregnancy, one finds the colon bacillus in the majority of infections. The Escherichia coli, no doubt, is the most common, and next possibly the Aerobacter aerogenes. In infections of the kidney, where the source can be traced to the blood stream, the staphylococcus aureus and albus are likely to be found and are very prevalent in kidney infections which are secondary to acute osteomyelitis and abscesses.

One should not overlook some of the other common organisms of kidney infections, such as streptococcus fecalis and bacillus proteus. These types are invariably brought about by contamination by instrumentation, often where a nephrotomy has been performed and a permanent tube has been left in the kidney. Some urologists have demonstrated that gonococci are the source of infection in the kidney. Many believe that these types of infection are of the ascending type, others are of the opinion that the gonococci reach the kidney through the blood stream. I can see where the source could be either or both, although I have never made a detailed study of such. Other organisms worthy of mention in connection with infections of the kidney are the bacillus pyocyaneus, the pseudodiphtheria bacillus, the pneumococcus, and numbers of others.

For convenience I have divided the routes and accessory causes of kidney infections as follows: hematogenous, lymph, adjacent foci, ascending, foreign bodies, trauma, and retention.

Hematogenous Infections—It is a known fact that infecting organisms may reach the kidney by the blood stream. It is also apparent that all infecting organisms which find their way into the blood do not produce a lesion in the kidney. The organisms are either destroyed in the blood and never reach the kidney, or are weakened in the blood to the extent that they do not pro-

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duce any marked damage in the kidney. Numerous experiments have been made on animals by injecting different strains of infecting organisms into the blood to produce a lesion in the kidney. It has been shown in this way that certain strains of colon bacilli will produce lesions in the kidney. The kidney is quite often infected through the blood stream following an operation. Very often the doctor in passing a sound will set up enough trauma to infect the kidney through the blood. It has been claimed by many that infections from such conditions as an infected tooth or tonsil will reach the kidney through the blood stream; also one will get a kidney involvement from such infections as carbuncles, boils, and upper respiratory infections.

Lymph Stream Infections — Since we know that the large intestine is the chief source of bacteria, and that bacteria are constantly entering the lymphatics from the intestine, it seems plausible that infection may reach the kidney through the lymph. While there is no clear evidence that infection reaches and damages the kidney through the lymph, the theory is held by many that colon bacilli may pass directly from the ascending colon to the right kidney and from the descending colon to the left. Of one thing I am certain, and that is that frequently a history of chronic constipation and occasionally an attack of diarrhea will precede the kidney symptoms. A number of experiments have been made trying to demonstrate beyond a doubt the transferring of infection from the lower groups of lymphatics to the higher. Some most attractive theories have been advanced. I do know that invariably one can have pus near the kidney without any damage to the kidney.

Ascending Infections—One is not able to doubt the fact that we do have ascending infections of the kidneys, even though there is no clear explanation of the precise method of progress. One may get an ascending infection of the kidney from trauma of the urethra or bladder, by passage of a sound into the urethra, or a cystoscope into the bladder. One cannot be too gentle in passing these instruments nor too careful in sterilizing them. We all know that obstruction in the genito-urinary tract paves the way for infection. If this obstruction is allowed to go untreated and unrelieved over a long period, the result will be a damaged kidney. The effect on the kidney will be very much the same whether the obstruction be at the neck of the bladder or up in the ureter. Congenital abnormalities of the ureter, kidney, or bladder will result in infection of the kidneys. Bifurcated ureters, horseshoe kidneys, obstruction in a ureter from a stone, or stricture, and in fact any condition which results in poor drainage from the kidney to the bladder, may lead to a kidney infection. Infections of the kidney are frequently found in old hypertrophied prostate cases. Some neoplasm in the bladder located near enough the ureteral orifice to cause an obstruction of the ureter, if untreated, will damage the kidney.

Pathology

The anatomic changes in the kidney are so diverse that it is difficult to discuss these in the short period allotted. I will say, however, that many pathologists say that it is impossible for them to distinguish with any degree of certainty the difference between the lesions of the kidney, which are of hematogenous origin and those due to ascending infection. The pathologist has an opportunity to study the end-results of the disease rather than the early stages of the infection, however.

Diagnosis

A complete history is of paramount value in making a diagnosis of kidney infections. A record of trauma to a kidney, even though the injury happened several years previously, is important as the kidney may be misplaced, thereby causing a kink in the ureter and poor drainage from the kidney to the bladder, the result of which will be a renal infection. Practically all renal and ureteral stones carry infection so it is essential to determine the presence or absence of these stones. Many cases go unrecognized because of the mildness of the attack and of the spontaneous healing. It is very difficult to diagnose some cases; often this is

not done until an exploratory operation is performed or an autopsy is done. Renal carbuncles are found more often in men than in women. They are rarely discovered in infants, most of these patients being between 25 and 50 years of age.

The x-ray and cystoscope are practically indispensable in making an accurate diagnosis of renal infections. The laboratory reports, of course, are no less important. With the three combined one may tell if there is any anomaly of the kidneys or ureters and may also determine in which kidney the infection is harbored, the type of infection present and the approximate degree of renal function. A retrograde pyelogram serves three purposes: it gives one an idea relative to any kink or stricture in the ureter and also demonstrates the presence or absence of any anomaly in the kidney or ureter, as well as aiding in the treatment by establishing good drainage from the kidney to the bladder.

SYMPTOMS

Very often the symptoms of a renal infection are very slight and easily overlooked. One may get a dull aching pain over one or both renal regions, more frequently over both. Also there may be marked thirst with dryness of the tongue, occasionally there is loss of appetite, loss of weight and frontal headache. The kidney may or may not be palpated and is not always tender. There will possibly be a slight polyuria with pale, clear urine. A more marked involvement of the kidney will show these symptoms more exaggerated. The symptoms vary according to the severity of an infection. In an acute suppuration one may get a leukocytosis, chills, pyrexia, acute lumbar pains, enlargement of the kidney and a gradual loss of weight. This acute condition may progress onward to uremia and death.

Practically all suppurative processes of the kidney should be considered serious matters regardless of the symptoms, as any of these infections can be neglected until they will jeopardize the life of a patient. It is of paramount importance that infections be recognized early in order that instant treatment may be administered. Often one is dealing with a patient for whom conservative treatment will suffice; on the other hand, one may be dealing with some condition necessitating nephrectomy. If one recognizes the condition and does not delay treatment too long, the chances of recovery are good for most patients.

TREATMENT

In treating infections of the kidneys one should bear in mind that no two cases are exactly alike, as one gets varied degrees of infection. Measures to build up the general condition of a patient in order that he may have greater resistance for any treatment procedure should be instituted, such as rest, a suitable diet, bowel regulation and large amounts of fluids where indicated.

Some of the milder types of infection will improve just by keeping the patient in bed, while others will require some radical procedure such as a nephrectomy. I have had numerous patients in whom the symptoms cleared just by simply dilating the ureters and establishing good drainage from the kidneys to the bladder. In severe cases of pyelitis it is often necessary to catheterize the ureters, leave the catheters in place and lavage the kidneys every three of four hours with argyrol, 0.5 per cent solution of silver nitrate, acriflavine, or mercurochrome. Sulfathiazole, sulfanilamide or sulfapyradine, given in doses of 40 to 60 grains daily, will aid greatly in clearing a great number of infections, preferably sulfathiazole. No drug, however, will do the work if one is dealing with a patient in whom there is a kink in the ureter, a stone in the ureter, or a ptosed kidney with a tortuous ureter, or some aberrant vessel or tumor causing obstruction. One should first remedy these conditions and then administer the drugs. Often one has to perform a nephrotomy and place a drainage catheter in the pelvis of the kidney or a drainage tube around the kidney in order to combat the infection.

Oral urinary antiseptics are of great value in treating kidney infections, especially when used in the simple, superficial group of cases. The choice of an antiseptic

will depend on the type of organism as well as the tolerance of the patient to these drugs. Mandelic acid, methenamine and sulfanilamide are among the most important urinary antiseptics. The ketogenic diet has been recommended in the colon bacillus group of infections, but on account of it being so poorly tolerated by most patients, it has been discontinued by many urologists.

Vaccines and bacteriophage have been thoroughly tested and tried by many but in my opinion they are considered not as popular and successful as at one time. Before one resorts to surgery on one kidney it is of paramount importance to check the function of the kidney. This can be easily done with either indigo-carmine or phenolsulphonphthalein. Every effort should be made to improve the better kidney before attempting surgery on the opposite kidney. If both kidneys are poor it may be necessary to perform a nephrostomy on both kidneys.

Reports of Cases

In a series of lantern slides I shall present briefly a variety of reports of cases of infections in the kidney.

Case 1—A. W., a well developed male, aged 50, gave a history of injury to his right side from heavy lifting. Subsequent to the injury he began to have pains over his right loin, and also hematuria. These pains were worse when the patient stood or walked considerably. He was unable to perform any strenuous work. Pyelogram showed ptosis of the right kidney with tortuous ureter. Urinalysis showed presence of pus in urine from the right kidney. Symptoms in this case were relieved with nephropexy of right kidney.

Case 2—B. S., male, aged 50, complained of pains in back and over both loins. Indigo-carmine functional test showed an impaired function in both kidneys. Left kidney showed a large stag-horn stone; the right kidney also had a stone. Both kidneys showed a large amount of pus. Stones removed. Uneventful recovery.

Case 3—H. C., male, aged 48, had bilateral pyelitis and bilateral calculi with impaired function in both kidneys. Stones were removed from both kidneys with the result that the patient made an uneventful recovery.

Case 4—D. I. B., male, aged 52, had practically a functionless kidney on the right side, with normal function of the left kidney. Specimen from the right kidney was almost entirely of pus. X-ray showed a markedly enlarged kidney. Patient had temperature from 99 to 102° F., and suffered with severe pains over the right loin. There was also a loss in weight. Nephrectomy was performed on the right kidney. Patient regained his weight, was apparently normal in appearance and said he felt better than he had in years. Pathologist reported a tuberculous kidney, though the guinea pig inoculation test prior to the operation was negative. This nephrectomy was performed about five years ago. I saw the patient about a year ago and he was in very good health at the time.

Case 5—C. S., male, aged 45, had congenital anomalous ureters and bifurcation of ureters on both sides with bilateral pyelitis. He suffered with pains over both loins and had intermittent hematuria. The symptoms disappeared after good drainage was established in both sides from the kidneys to the bladder by thorough dilatation of the ureters and the administration of about 30 grains daily of sulfathiazole over a period of two weeks.

Case 6—R. P., male, aged 42, had a bilateral pyelitis with practically no function on the left side. Indigo-carmine dye did not appear on left side in 15 minutes; the dye appeared on the right in 5 minutes. X-ray showed stones in both kidneys with an enlarged kidney on the left. The stones were removed from both kidneys and a nephrostomy tube was placed in the left kidney for several weeks. Fairly good function returned to the left kidney and the pyelitis cleared under sulfathiazole therapy.

Case 7—M. W., male, aged 43, had bilateral pyelitis. X-ray showed what appeared to be a horseshoe kidney. The pyelitis cleared under sulfathiazole treatment.

Case 8—L. B., male, aged 46, gave a history of lues in 1914. He was treated for a period of two years for his syphilis. In 1934 he began to have pus in his urine and severe pains over the region of the left kidney. On examination a large pus, functionless kidney was found on the left side; the right kidney was normal in function. A left nephrectomy was performed with the result that the patient made an uneventful recovery.

Case 9—M. C., female, aged 29, complained of severe pains over her back and both loins. Urine contained large number of pus cells and (microscopic) blood. There was inpaired function in the left kidney. X-ray showed stones in both kidneys. Stones were removed from both kidneys and the patient was given sulfathiazole, 30 grains daily; made good recovery.

Conclusions

1. Obtain a complete history of the case as this has an important bearing on the diagnosis.
2. In making a diagnosis one should take advantage of cystoscopic, x-ray and laboratory methods.
3. When one determines the exact organism causing the infection, the method of treatment is simplified.
4. Drugs, such as sulfathiazole, mandelic acid, acriflavine, and methenamine, are

of great help in ridding a kidney of infection.

5. Before administering antiseptics one should correct such conditions as renal calculi, kinks in ureters, strictures in ureters, or any condition which has a tendency to cause poor drainage from kidney to ureter.
6. In severe infections nothing will improve a patient's condition other than a major operation, such as nephrotomy, nephropexy or nephrectomy.

WHEN TO OPERATE FOR URINARY CALCULI

RUDOLPH BELL, M.D.
Thomasville

The inconsistency in advice given by conscientious physicians to patients having urinary calculi carries with it the mark of infamy of the urologist for not having developed and publicized a more uniform method for the management of patients with stones. It is more or less characteristic of individuals, on learning that they have calculi, to seek the advice of numerous physicians. Due to the lack of uniformity in the method of handling patients with stones, the patient does not get the same type of advice from any two doctors. Therefore, before giving advice to the individual presenting himself with urinary stones, it is imperative to know his general condition, the amount of his discomfort, the function of each of his kidneys, the size of the stone, the degree of infection, and the expectant span of life.

The above factors are determined by first soliciting an accurate present and past medical history, making a thorough physical examination and then doing a complete urologic investigation.

Urologic Investigation

A plain x-ray of the kidney, ureter and bladder region is obtained on forced inspiration before the cystoscope is introduced. On cystoscopy the urethra and bladder are inspected for pathologic changes and anomalies. No. 6 French catheters are then passed to each kidney pelvis. Specimens of urine are obtained from the bladder and each kidney for chemical, microscopic and bacteriologic studies. The function of each kidney is determined.

With the opaque catheters in the ureters another plain film is made on forced expiration. By comparing the two films the normal respiratory excursion of the kidneys can be obtained. Also small shadows in the urinary tract, which are at times obscured by bony structures, may be noted in one or the other films. Small shadows which appear to be in the region of the ureters in the first film may be well away from the ureters when compared to the film with the opaque catheters in the ureters. It is possible for the catheters to overlie the shadow of very small ureteral stones. No. 6 French catheters are used for routine study as they should pass up normal ureters without resistance.

Pyelograms are obtained by injecting the contrast medium into the kidney pelves with the patient in the supine position. The patient is then put in an upright position, the catheters are slowly withdrawn as the contrast medium is being injected, to obtain the pyeloureterograms.

Size of Stone

The size of stones measuring one centimeter in diameter or under plays a minor part in their delivery through the ureter, as compared to their shape and contour and the condition of the ureter. Some stones are shaped so as to spike the ureteral wall on attempted closed removal. It is best not to use much traction in removing stones through the ureter, but to try again at a later date. The majority of small stones can be removed in this manner. A chronically inflamed ureter with numerous angulations, part of its wall thick and part thin, rather invites an extravasation of urine about its surface if much forceful manipulation is done. However, in the absence of infection it is safe and best to be patient, work with the stone gently and receive the reward of delivering it through the ureter without complications. But in the case of a

Read before the Medical Association of Georgia, Macon, May 15, 1941.

great amount of infection of the kidney, which cannot be drained by catheterization, open operation should be resorted to, regardless of how small the stone is. Too often has the operator had to swallow his pride and cut down on some small stone under the most trying circumstances and upon presenting it have some member of the family remark, "Why, doctor, I passed one larger than that myself."

During the period of six years, from 1934 to 1941, I did 481 pyeloureterograms at the John D. Archbold Memorial Hospital, Thomasville. Of this number 115 patients, or 23.7 per cent, had stones in the upper urinary tract, as may be noted in the accompanying diagram:

481 Pyelograms in 6 years, 1935-1940 inclusive.
Revealed 115 stone cases (upper urinary tract) or 23.7%.
Ages 14-72 years. Average age 39 years.

LOCATION OF STONE

Right ureteral	Left ureteral	Right renal	Left renal	Multiple stones
36 or	27 or	27 or	25 or	25 or
31% plus	23% plus	23% plus	22% minus	22% minus

Number of patients from whom stones were removed — 82 or 71.3% plus.
Cystoscopic Means — 39 or 47.5% plus. Open Operation — 43 or 52.4% plus.

OPERATIVE PROCEDURE

Uretero-lithotomy	Pyelo-lithotomy	Nephro-lithotomy	Nephrectomy (Calculo-pyonephritis)	Vaginal Uretero-lithotomy
13 or	11 or	9 or	8 or	2 or
30.2% plus	25.5% plus	20.9% plus	18.6% plus	4.6% plus

Number of patients from whom stones were not removed — 20 or 23%.
Number of patients under observation pending removal of stone — 10 or 8.6% plus.
Operation advised but not accepted — 10 patients or 8.7% plus.
Operation not advised — 9 patients or 7.8% plus.
Consultation and operation by general surgeon — 4 patients or 3.4% plus.

Infection

When infection is added to the partly destroyed and obstructed calculous kidney, the situation becomes much more serious. The kidney is destroyed more rapidly and the opposite kidney is more likely to become infected and form stones. Of this Twinem[1] says, "In bilateral lithiasis, urinary tract infection is almost always present. Stone formation does not occur in the second kidney unless the opposite kidney has already become infected. We may say, therefore, that in the great majority of cases, bilateral stone is the result of a bilateral infection. It follows that the best way to prevent the formation of stone in the opposite kidney is early removal of the original calculus." The chance of systemic infection is greatly increased. It is to be remembered that an individual may succumb to a malady more pronounced than the renal condition, but which was primarily brought about by the kidney infection. If the drainage becomes completely blocked the situation is grave. Regardless of the general condition of the patient, a sufficient drainage must be done to sustain life. There is no time for elective methods if the pus cannot be drained by ureteral catheterization. The operation has to take place. Too often it is just a drainage for temporary improvement with the idea in view of going back and removing the kidney if the patient survives the first operation.

Pain in the Dying Kidney

The degree of discomfort produced by stones cannot be construed as a gauge to determine the degree of wasting of the corresponding kidney, but it does indicate that destruction is taking place. Renal colic, from complete blockage of a kidney, will gradually subside to no pain at all only to leave a dead kidney. So long as there is a partial drainage of the kidney pelvis, or not a complete blockage, the pain is likely to persist but to a less extent than

at the onset. These two factors, unless explained by the physician, lead the individual to believe that his condition is improving and that all he needs is just a little more time to overcome the malady. It is not uncommon to have such an individual report for a urologic investigation months after the onset of the first symptoms and to learn that he now has a completely dead kidney. More often there is a tenth or more of the usual kidney function remaining and when so, under favorable conditions, that kidney should be saved for its power of regeneration is astounding.

Summary and Conclusions

1. In 481 consecutive pyeloureterograms stones were revealed in the upper urinary tract in 115 patients, or 23.7 per cent.
2. Except in the debilitated, every patient with stones should have a complete urologic investigation.
3. Approximately 50 per cent (47.5 per cent) of upper urinary tract stones were removed by cystoscopic procedures.
4. Eight nephrectomies (or 18.6 per cent plus) for pus kidneys were necessary, due to delay in removal of the stones.
5. Operation was not advised in nine cases (7.8 per cent plus) because the probable benefit did not seem to justify the risk.
6. Do not postpone the operation until it becomes imperative, for then the chance of doing conservative work is greatly reduced.

REFERENCE

1. Francis P. Twinem: Bilateral Nephrolithiasis, Am. J. Surg. (April) 1934.

DISCUSSION ON PAPERS OF DOCTORS SINKOE, FOWLER, NICELEY, S. A. KIRKLAND AND RUDOLPH BELL

Dr. J. Righton Robertson (Augusta): wing to the limited time allowed for discussion of papers, I shall confine my remarks to the paper presented by Dr. Bell. A most important point stressed by him was the lack of uniformity of advice given by conscientious physicians to patients who have obstructions in their urinary tracts due to calculi. We urologists are certainly to blame in a large measure for not laying more stress on the proper method of handling these patients.

A patient presenting the symptoms of pain in the region of the kidney, radiating downward into the groin, frequently accompanied by nausea and vomiting, the microscopic examination revealing red and white blood cells, should be strongly suspected of having a stone in the upper urinary tract. Frequently the x-ray examination will confirm the diagnosis, but in quite a large percentage, where the stone is small and of uratic composition, it is missed. In such cases an excretory urogram will often be helpful, both as to the location of the stone and as to the function of the kidney, a most important thing to consider. Stones causing the most trouble are the small ones with spicules. The large stones have grooves which permit the urine to pass.

The question is always asked every physician consulted by the patient if there is not something to be given which will dissolve the stone, and the answer, of course, should always be in the negative, except perhaps if the stone is of cystin composition; but such cases are very rare. The presence of a stone in the urinary tract is evidence of some metabolic disorder of which we, at the present time, are in the dark and the best that we can offer our patient is to develop enough skill to remove them when they form, which can be done very successfully with the many ingenuous instruments designed for the purpose. It is seldom ever necessary to resort to open operation. Once the stone enters the ureter a very large per cent can be removed by cystoscopic manipulation.

According to Dr. Alexander Randall, of Philadelphia, who has carried on a most exhaustive study regarding the formation of calculi, it has been shown that incrustations of various urinary salts are deposited on the papillae of the kidneys which have been previously eroded by infection, and that these small particles break off and begin to grow in the renal pelvis, later on to begin their passage down the ureter. The presence of a stone anywhere in the urinary tract with or without symptoms, always means pathologic changes, and it is necessary to remove the stone by one means or another to avoid this eventuality. It is claimed that 90 per cent of all stones will pass into the bladder, but not all will pass spontaneously and without aid.

During the past five years we have found it necessary to operate on only one patient with ureteral calculus. This stone was lodged in the ureter just below the uretero-pelvic juncture. Many attempts were made to remove it by cystoscopic manipulation but without success. The stone was about the size of a large bean and was impacted, causing urinary retention and infection. The remaining cases, and quite a large number, have been handled successfully by cystoscopic manipulation, not at one sitting however but often by repeated efforts, employing the various instruments designed for this purpose, among which may be mentioned, the Howard spiral extractor with a whalebone filiform guide, the Council and Johnson instruments in which the stone is caught in wire loops and extracted, the indwelling ureteral catheters, and the single ureteral catheter with Nylon or strong silk tied in the end, the catheter being

introduced beyond the stone and into the pelvis and then pulled down by the thread, engaging the stone. This is a very safe and effective method of withdrawing a stone, and is particularly applicable in stones of large size. (Slide demonstrating its use will be shown later). In the event the stone cannot be removed, the catheter can be withdrawn. This can not be done when the stone is caught in the meshes of a metal instrument.

There are many who are opposed to the use of these measures on account of the danger of injury to the ureter, and they prefer the open operation. In our hands this complication has not occurred, and we feel that it is the method of choice. The greatest care should be exercised in trying to withdraw the stone. When we experience difficulty in pulling the stone down into the bladder, the instrument is disconnected and left in the ureter until the next day when it is easily withdrawn. It does not damage a ureter to leave a catheter or instrument in for 24 or 36 hours, or longer if necessary. We have not seen any kidneys damaged by the ureter being blocked by a calculus. Damaged kidneys all have a wonderful power of recuperation, this being taken into consideration when we undertake to remove a stone by cystoscopic manipulation.

Dr. S. Elliott Wilson (Savannah): The excellent results obtained by Dr. Sinkoe have convinced me that I have been overlooking a valuable procedure. I have felt that nephropexy was only indicated in those cases with a marked ptosis. All of us have seen cases complaining of nervous fatigue and a dull pain in the right side, hardly enough to consult a physician. Examination will show only a moderate ptosis with a mild infection of the kidney. These cases, if not relieved by dilatation of the ureter and lavage of the kidney pelvis, would probably be relieved by a nephropexy and possibly a renal sympathectomy. I intend to try this on the next case that I have of this type. The triangular stitch of Kelly, using silk as a suture, has proved very satisfactory as a method of nephropexy.

The problem of ureteral stones has interested me greatly, especially those of suitable size to be removed cystoscopically. After trying various methods I have adopted the method of Jarman and Scott, using a 2 per cent solution of avertin as an injection through the ureteral catheters just before their removal. I try to pass at least two No. 5 catheters by the stone and they are left in for twenty-four hours. The avertin is injected and the catheters plugged for five minutes. They are twisted and slowly removed. It is surprising the number of stones that will pass after this maneuver. I try it a second or third time if necessary as long as there is no serious infection in the kidney. The question of infection, as stressed by Dr. Bell, should be further stressed. Bilateral stones only form in bilaterally infected kidneys and the original stone or infection should be removed as quickly as possible so as to protect the good kidney.

The treatment of infections of the kidney, as outlined by Dr. Kirkland, depends on many factors, the chief of which seems to be the establishment of adequate drainage. The use of the indwelling ureteral catheter has many advantages as in severe cases of pyelitis and pyelonephritis, infections from stones, closure of sinuses following ureterotomy, ureteral strictures, etc. The disadvantage of the catheter, heretofore, has been that it would not remain open long enough to accomplish any good. A large catheter, preferably a No. 7 or No. 8, is passed and tied in place. A 5 per cent solution or suspension of caroid powder is used as an injection in order to keep the catheter open. Caroid is a powerful vegetable enzyme and is capable of liquifying or dissolving pus or mucus; 2-4 cc. of this solution are injected and the catheter is plugged for five minutes. It is then allowed to drain out and the kidney is lavaged with an equal amount of boric acid solution. This is done every hour or two in badly infected cases. The solution is absolutely non-irritating and could possibly be used in greater strengths. I am now working on this. This is, I believe, an original contribution and hope to be able to report further on it at a later date. I was able to keep a No. 7 catheter in a patient for fourteen days that had a draining sinus following a ureterotomy for a ureteral stone. This is certainly the longest that I have ever been able to keep one open. The sinus healed promptly and the infection cleared up under the drainage and sulfathiazole.

Dr. A. J. Mooney (Statesboro): In discussing this very interesting symposium this morning, I want to speak of the remarkable work that has been done by Dr. Robertson with that ingenious instrument of his for taking stones from the ureter, but more especially I want to discuss the paper of Dr. Sinkoe and call attention to how careful he was in stating the subject of his paper, namely, "For the Relief of Symptoms Resulting from Extreme Renal Mobility." As we know, I would say 20 per cent of the multipara have a more or less movable kidney. So many of them are entirely symptomless and I am sure that Dr. Sinkoe, in preparing this paper, was very careful to eliminate the possibility of a general visceroptosis. So frequently in these cases we observe under the fluoroscope the heart is hanging down and associated also are coloptosis and gastroptosis and strain symptoms go with an individual below par whose cause it is so difficult to determine except through some below par condition of the vegetative nervous system. If we were to attack some of these cases of floating kidney where they are even so movable that they come down in the abdomen and yet give no symptoms, I fear that we would be disappointed in our ultimate result.

A wave of nephropexy goes over the country occasionally. I remember so well such a wave at Johns Hopkins some years ago which started in Boston and went over the country and everyone was taking sides. Dr. Kelly was operating. Dr. Osler, in his whimsical way, said, "There are two forms of floating kidney—first, the Boston, or cerebral; and second, the abdominal form, upon which I am sure Dr. Kelly is operating." One symptom indicative of anchoring a kidney is a kink in the ureter with resulting stricture that brings about the symptoms concomitant upon a floating kidney in which the ureter has become twisted. I would speak this word

elaborating upon the part of Dr. Sinkoe's paper relating to symptoms resulting from extreme renal mobility.

Dr. W. F. Reavis (Waycross): There was quite a bit of mention made of anomalies. I think the error that we are all making in treating the subject is that we are not examining and not getting an opportunity to examine children with symptoms of urinary disturbance. It hasn't been long that we have had methods by which we could handle children easily. We have recently come into the use of the good weapon of intravenous pyelography. We have recently had given to us two anesthetics that work beautifully with children. Those who have attempted in the past to do cystoscopic work, pyelograph and retrograde type, on children, were very much disappointed in the work you did under general anesthesia in that children were breathing so fast the pictures were so distorted there was little evidence worth while. With the use of pentothal sodium and avertin, you can get retrograde pyelograms on children almost equal to adults. I want to bring to the attention of the men that if we were able to get to children earlier, the terrible crises developed earlier in life could be saved and we would save lots of kidneys.

Dr. Major Fowler (Atlanta): I shall confine my brief discussion to the paper of Dr. Sinkoe.

Reference has already been made to the problem of generalized visceroptosis, of course associated with nephroptosis. These are indeed unfortunate individuals, unfortunate from many angles, especially from the viewpoint of a cure. Regardless of what we do, these individuals are not going to be well. There is no reason, though, to give them up as hopeless and in many instances, we have no choice in the matter. I refer to cases with nephroptosis where there is generalized visceroptosis with progressive kidney damage. We cannot refrain from conservation in this instance and by that I mean every effort to preserve kidney substance and kidney function. If we risk surgery, which must be done where there is progressive kidney damage, the patient must be aware of the fact that he is not going to be entirely symptom free, but he must be convinced that surgery is necessary to conserve his kidney function and prolong his life. Cases of generalized visceroptosis without progressive damage, live to bless two generations of doctors sometimes but that is not the case if a kidney infection is present or if a progressive kidney damage is present. So, with the patient aware of his prospects of relief from nephropexy and willing to accept surgery with its limitations, I feel that we should give the patient the benefit of conservative surgery.

We frequently hear nephropexy spoken of in a light manner giving it an unfavorable reputation. After seeing Dr. Sinkoe's cases here and hearing his paper, taking into consideration that those patients were charity cases, underprivileged patients living under poor hygienic and poor nutritional conditions, unable to remain away from work as long as they should following surgery, I am convinced that there is a real place for nephropexy in urologic surgery.

Dr. J. Z. McDaniel (Augusta): I'd like to say just one or two words about Dr. Sinkoe's paper. If a kidney has some question of ptosis, it is well to remember that the kidney is not fixed. It is like the uterus. It really makes no difference whereabouts the kidney is, whether pelvis or thorax or anywhere, so long as it drains and the criterion for operation is whether or not the kidney is draining adequately.

Just a point about the operative procedure. Sometimes cases don't always hold up as well as Dr. Sinkoe's did and as added precaution it is well to strip the nerves from the renal artery. When you do this you stand a better chance of relieving a patient's pain and if you relieve their pain, they think they are well and it doesn't make so much difference where the kidney is, whether up or down.

Another little procedure Dr. McIver, of Jacksonville, originated, is to strip the lumbo-dorsal fascia and suture to the lower pole of the kidney. It has an advantage over other procedure in that it doesn't fix the kidney so much. If you attach it to the ribs, the kidney is more or less stationary. When held up by the fascia in a fascial hammock, it is possible for the kidney to move in normal excursions. It also has the advantage that it pulls the lower poles of the kidney outward a little bit which is their natural way of being and this slight eversion, if any, is sufficient sometimes to allow the kidney to drain properly.

Dr. Ralph H. Chaney (Augusta). I have just one comment to make in regard to this symposium which does not seem to have come to anybody's attention. It is a question of one little point in technic in regard to lashing these ptosed kidneys. I think it is probably an adoption of the same procedure that Dr. McIver in Jacksonville is using, but when you have found a case that needs fixation, I have tried the division of the capsule and suspending of the kidney over the twelfth rib and have found that those individuals on whom I have done that procedure very frequently had more pain than they had previously, and I have found you can take a strip of fascia lata from the thigh or take a strip of prepared ox fascia of very thin character or a strip of chromicized ribbon-gut and make through the slits in the fascia of the kidney and then slash that both at the lower pole and at the upper pole to posterior fascia overlying muscle giving fixation of the kidney which stays in position and does not defeat the normal mobility of the kidney afterward.

I now have a series of four cases in which I have checked previous excursions before and after operation and I haven't found that any of them have slipped at the present time.

Dr. Samuel J. Sinkoe (Atlanta): I want to emphasize one important point and that is to those men, doctors not practicing urology but practicing various other branches of medicine, that they should be urologically minded. In other words, if a woman comes in around are age of thirty-seven — that is the average age of our cases — complaining of pain referable to the uri-

nary tract, complaining of pain in the back radiating downward, frequency in getting up at night with a little blood in the urine, if you are urologically minded, advise them to undergo a complete urologic examination. A number of the patients showed on the screen came in with symptoms referable to the urinary tract. The majority of them had gastroptosis, generalized dropping of the entire abdominal organs but they had gone through the gastro-enterological department. Most of them had gone around in every department in the clinic and as a last resort were referred to us for urologic study. We found the kidneys remarkably low with associated angulation of the ureter, staphylococcus and proteus bacilli, and when we advised operation on these cases, these women were very anxious to have something done because they have suffered daily. Nephropexy is a surprisingly simple operation. Following several months, we find that giving a patient chemo-therapy and small doses of sulfathiazole along with occasional ureteral dilatation, these patients felt so much better and thankful for what was done.

So, again let me stress that the important thing is for these patients to come in for urologic check-up, even after operation from time to time in order that we may still study these cases, especially from the standpoint of kidney fixation and chemo-therapy and so that the patient may be educated to lead a useful life in after years.

Dr. Rudolph Bell (Thomasville): Cases of marked nephroptosis with many angulations of the ureter usually have, as a complication, ureteritis. Dr. Sinkoe spoke of pain not being relieved sometimes in cases after nephropexy. I think the reason for that is the accompanying ureteritis and sometimes it is of value to pass a douche up those ureters after operation.

In infections about the kidney, the procedure of making a picture on deep inspiration and another picture on forced expiration is of value in determining whether or not the infection about that kidney is sufficient to form a fixation.

Dr. Spencer A. Kirkland (Atlanta): I enjoyed Dr. Robertson's remarks in regard to removing stones. He has done some wonderful work and the way he pictures it, it sounds so easy. They say when a man perspires a lot over his work, he doesn't know his anatomy. I must say I have sweated a good deal over these stones in getting them out.

SULFATHIAZOLE OINTMENT EFFECTIVE FOR IMPETIGO CONTAGIOSA

The average time required to cure 40 patients with impetigo contagiosa, a contagious inflammatory skin disease, by local application of sulfathiazole (a derivative of sulfanilamide) in ointment form was nine and one-half days as compared with from twelve to sixteen days required with the previous conventional treatment, L. H. Winer, M.D., and E. A. Strakosch, M.D., Minneapolis, report in *The Journal of the American Medical Association* for January 17.

The two physicians explain that among the pus producing infections of the skin, impetigo contagiosa is the most superficial and also the most common.

EPIDEMIC PLEURODYNIA

Charles B. Fulghum, M.D.
Milledgeville

Between July 15 and Sept. 1, 1940, twenty-eight cases of epidemic pleurodynia were seen in Milledgeville and Baldwin County, Georgia, by the staff of the Baldwin Memorial Hospital.

The purpose of this paper is to report the epidemic and to call attention to the disease, which must be rare or unrecognized in this part of the country. The abrupt onset and the intensity of the symptoms suggest serious illness. In reality, it is short, self-limited, and without complications or mortality. Early recognition saves much anxiety for both physician and patient.

The syndrome and epidemic nature were first described by Dabney in Virginia in 1888. It reappeared in Virginia in 1923.[9] Subsequent epidemics have been reported as follows: New York in 1923[3]; New Jersey and Pennsylvania 1924[6]; Massachusetts in 1933[6]; Illinois in 1934[1]; Ohio in 1934[5] and 1935[8]; and Missouri in 1936[2]. All epidemics occurred during the summer months. Most of those affected were older children and young adults. In the Milledgeville epidemic the age extremes were thirteen months and sixty-four years.

Etiology

The etiology is unknown. In 1924 Small described a plasmodium within the erythrocyte which he thought was probably the etiologic agent. He did not believe the disease to be contagious. It has been shown in institutional epidemics that water, food and milk do not carry the virus. Small believed that the weight of evidence indicated that an insect spread the disease probably through its bite.[9] Intravenous injection of volunteers with blood taken from patients in various stages of the disease has failed to reproduce the disease in the inoculated subjects. The plasmodium has not been confirmed. In our epidemic stained blood films were examined early and late. In no instance was plasmodium seen.

Read at Sixth District Medical Society, Macon, Dec. 5, 1940.

Rector, studying the disease in children in the 1933 Boston epidemic, thought it seemed likely that the entry was through the nasopharynx with a droplet infection as the most important factor.[3]

In the Milledgeville epidemic every patient showed pharyngitis. The first five cases occurred in children aged 3 to 10 years who played together constantly. These children fell ill in succession at intervals of from five to seven days. In only one other instance did two cases occur in one house.

Pathology

Because there has never been a death attributable to this disease, the pathologic anatomy has not been studied. The symptoms suggest involvment of the diaphragm or intercostal muscles as the pain roughly follows the diaphragmatic attachment to the thoracic wall.[9]

Symptoms and Clinical Course

Because the laboratory at present gives no aid the symptoms and clinical course are of greatest importance.

Pain is the foremost symptom. The onset is abrupt. It may be localized to the epigastrium or may extend along one or both costal margins. It is described as cutting or squeezing. This is aggravated by respiration or movement of the trunk, especially by extension of the trunk. Fever from 101 to 104 degrees F. follows quickly after the onset of pain. Headache was an invariable accompaniment during the Milledgeville epidemic. This was general or occipital, extending down the neck. Occasionally there is a chill at the onset of the paroxysm. Usually there are recurring chilly sensations. General malaise, backache and legache, such as are seen in malaria, influenza and dengue are conspicuously absent. The pulse rate is elevated in proportion to the temperature. Respiration is rapid but cough is never present. Although an occasional patient may vomit or have a loose stool, gastro-intestinal symptoms are extremely rare. Sweating, which was prominent in several epidemics, was not marked in this epidemic.[1 3]

The pain and fever continue from 12 to 24 hours. In the Milledgeville epidemic two initial paroxysms lasted 48 hours, and one apparently single proxysm lasted four days. The pain gradually subsides and the temperature falls rapidly, usually just after the pain is gone. The disease may terminate at this point.

After one or two days of comfort there may be a second paroxysm, usually less severe than the first. Rarely, after another one or two days of comfort, there may even be a third.

During the second and third paroxysms the pain may radiate upward over one side of the chest to the shoulder. Pain, which was under one costal margin during the first paroxysm, may be under the other or under both in later paroxysms. The terrific epigastric pain is most pronounced during the first paroxysm. The duration of the illness in this epidemic was from 24 hours to twelve days.

Physical Findings

When seen at the onset the skin is moist, flushed and hot. Respiration is rapid and shallow because of the respiratory pain. The patient lies on the side or on the back with the knees drawn up and the trunk flexed. Any attempt to extend the trunk or knees causes excruciating pain. Many patients in the Milledgeville epidemic walked into the physician's office with the first paroxysm. They walked bent over, the posture resembling that of the ambulant acute appendix, except that the hands were over the epigastrium or costal margins instead of the lower abdomen.

Chest examination is entirely negative. Friction rubs are never heard. There is extreme tenderness over the distribution of the pain. The epigastrium and hypochondrium show much protective muscular spasm. Involuntary rigidity was not seen in our epidemic. In severe paroxysms the epigastrium is rigid because the patient is keeping the trunk flexed to avoid pain. He cannot relax. At times there is lower abdominal tenderness. This is usually a prodromal symptom occurring shortly before the onset of the violent pain.

In most of the reported epidemics the pharynx showed no abnormality. Mac-

Donald, reporting a hospital epidemic in children, saw pharyngitis in 25 per cent of his cases.[7] In the Milledgeville epidemic an intense infection of the pharynx was always present. This was so characteristic that it came to be looked upon as one of the diagnostic criteria of the disease.

The pharynx, fauces, tonsils, and soft palate were bright cherry red and were covered with glistening stringy mucus. There was no edema and no exudate. In many there was a sharp line of demarcation between the cherry red soft palate and the yellowish pink of the hard palate. This throat, so striking in appearance, gave no symptoms. In no instance did a patient admit any sore throat even after having been told of the appearance.

Laboratory Findings

The only constant finding is an initial leukocytosis of ten to twenty thousand with moderate increase in the percentage of neutrophiles. By the third day a leukopenia develops, there being three to four thousand cells and a normal differential count. The leukopenia persists throughout the illness.

Cultures and immediate throat smears showed no unusual organism. Blood films showed no plasmodia. Urine examinations were negative except in three instances in which a microscopic hematuria (100 r.b.c. per h.p.f.) occurred with the first paroxysm.

X-ray examination of the chest showed no abnormality. One gastro-intestinal series for a patient who was thought to have a peptic ulcer showed no evidence of disease. One electrocardiogram for a patient thought to have a coronary occlusion showed no evidence of disease.

Diagnosis

The sudden onset, the character and location of the pain, the short high fever, and the recurring paroxysms constitute a clinical picture not difficult to recognize if one has ever seen it before. Pneumonia may be excluded by the absence of cough and physical findings in the chest. Acute pleurisy causing this much pain is accompanied by an audible friction rub. Dengue, influenza and malaria all cause general aching and malaise which are not seen in this disease. Coronary occlusion presents slight difficulty. One such patient was seen in our epidemic in an arteriosclerotic old lady of sixty-four years. The high fever, headache, lack of cardiographic evidence, and subsequent clinical course made the differential diagnosis.

Acute intra-abdominal syndromes are frequently simulated. One of our patients was suspected of having a perforated peptic ulcer. Several were suspected of appendicitis at the onset of the epigastric pain and leukocytosis. The subsequent headache and high fever, and lack of lower right quadrant localization, rendered the diagnosis of appendicitis untenable. At the Massachusetts General Hospital two such patients have been operated on with a preoperative diagnosis of appendicitis,[6] from whom normal appendices were removed. In children the pain is more apt to lie in the abdomen than in the chest,[3] but the rapid respiratory rate, expiratory grunt and flushed face are so suggestive of pneumonia that operation is not likely to be considered.

Prognosis

The prognosis is excellent, as complete recovery is invariable. Orchitis has been reported in one instance.[1] In this case the writer was not sure that the orchitis was a complication of the disease.

Treatment

Treatment is as yet symptomatic. Morphine is required for the relief of pain. Codein and aspirin, which usually give great relief in the disease in which malaise and aching are prominent, are of little use in controlling the pain of pleurodynia. The chest binder is also of little benefit in our experience. Quinine is thought to be specific. It was extensively used in our epidemic but did not alter the course of the disease. So many of these patients have only one paroxysm that the use of specific therapy is hard to evaluate. The fact that the second and third paroxysms are normally much less severe than the first also leads to confusion in the interpretation of therapeutic results.

References omitted for lack of space and will be included in reprints.

TRAUMATIC CONDITIONS OF THE WRIST

FRED G. HODGSON, M.D.
Atlanta

Colles' Fracture. This is one of the most common fractures to occur in adults. It is caused by a fall on the outstretched hand. The lower fragment is driven backward and usually impacted. It occurs very often in women past forty years of age and may cause much disability unless handled properly. The diagnosis is not difficult because of the typical "silver fork" deformity. X-ray films of the normal wrist joint show the styloid process of the radius extends 1/4 inch distally beyond the styloid of the ulna. Also the articular surface of the radius shows a forward tilt of about 5 degrees. In Colles' fracture the radius is shortened and the articular surface is tilted backward. The tip of the ulna styloid is frequently fractured.

For a complete reduction a local or general anaesthetic should be used. Check-up by fluoroscope or x-ray film to be sure normal relations have been restored at the wrist joint. To maintain reduction I prefer a nonpadded plaster of Paris splint which is broad enough to encircle almost the entire wrist, and long enough to extend from the metacarpophalangeal joints posteriorly to the elbow joint. This is applied before it begins to harden and is held in place by a 3-inch gauze bandage. The splint should not interfere with the motion of the fingers or the elbow joint. Motions of the fingers should be insisted upon as early as possible. This prevents stiffness and keeps up the muscle tone. The splint is worn for five weeks without interruption. If the patient has used his hand regularly very little baking or massage is needed after the splint is removed.

Prognosis. If the reduction has been properly performed good results are obtained. If the reduction has been incomplete or if the fingers have not been freely used, deformity, stiffness, pain and disability frequently result.

Fracture of the Carpal Scaphoid. This fracture is often overlooked and leads to prolonged disability and nonunion unless properly treated. If there is pain in the anatomic "snuff box," aggravated by pressure on the end of the second metacarpal bone, this fracture should be suspected. X-ray films should be made, anteroposterior and lateral, and also in an oblique position, to bring out the fracture line. Union in this bone is very slow in taking place. Immobilization of the wrist joint must be maintained until the x-ray examination shows complete union.

A plaster cast is applied holding the hand in radial deviation and including the thumb. Prolonged immobilization will result in union. Some surgeons advise drilling the bone fragments, others use a bone graft; but these operations are rarely needed. The secret of success is prolonged immobilization of the wrist joint, while use of the fingers is encouraged. X-ray films taken once a month will determine when the splint may be discarded.

Dislocation of the carpal semilunar bone is not a rare condition. It is caused by severe hyperextension of the hand on the wrist. One patient came to me with bilateral dislocation of both semilunar bones after a fall from a telephone pole and landing on his hands. The bone is dislocated forward at the wrist joint and frequently causes pressure on the median nerve. The diagnosis is not difficult. The wrist is thickened anteriorly, flexion of the fingers is painful, and often there is a tingling sensation or numbness of the fingers. X-ray examinations confirm the diagnosis.

If these patients are seen early, reduction can usually be secured. Strong traction on the hand by an assistant opens up the space where the bone belongs. Also, strong backward pressure on the bone by the thumbs of the surgeon as the assistant flexes the hand forward. After two weeks have passed from the time of the accident it is usually impossible to reduce the bone. Then an anterior longitudinal incision is made over the wrist joint. If the bone is not easily reduced it had better be removed.

(Continued on page 77)

THE PRESIDENT'S PAGE

FEE-SPLITTING



The Atlanta Journal of Feb. 3, 1941, had a timely editorial on this important subject. The editor quoted a report of the address by the new president of the Medical Society of the County of New York as published in the *New York Herald Tribune*.

Commented *The Journal*: "His plan is nothing more nor less than the legalization of the practice."

That there is much more to the question than the money involved is well illustrated by the following from the pen of the late Dr. E. C. Thrash:[1]

"The burning question then is, how shall we purge the Association of these money-changers in the temple?

"There are three classes of fee splitters:

"(1) Innate crooks.

"(2) The man, impecunious, young or otherwise handicapped who resents the bulk of work going to the man higher up whom he may consider his inferior in ability.

"(3) The man who has not fully comprehended the heinousness of fee-splitting.

"Class one is hopeless and unreclaimable since crooks are usually born and not made.

"Class two may reform autogenously by becoming more prosperous or by seeing the error of his way, and one of the purposes of this essay is to aid and hasten him in his reformation. O for a Billy Sunday to help him hit the Hippocratic trail! Doctor, it is assumed in the outset that you know better, so rise above this monster before it is too late, before your conscience is dulled, before you become stultified, before you get the habit, and say 'get thee behind me Satan.' The science of medicine must not be dragged down to such low depths. It stands for everything that is ennobling, honorable, uplifting, sacred,—a shrine upon the altar of which should be laid the labor-offering of him who serves.

"Class three is made up chiefly of men who in their busy career do not analyze the ethical aspects of fee-splitting, satisfying themselves that they have rendered service for the fee and that they are getting only what is due.

"Doctor, after years of preparation and probably weeks of skillful service, do you feel so ashamed of this preparation and skill that you must stealthily and secretly obtain your well-earned fee? Do you feel so servile as to besmirch your Aesculapian escutcheon by accepting a tip like a menial? If you have done such a thing hang your head in shame. Ask the God who made you for forgiveness. Go to him who stultified you and fling the money in his face. Your patient has selected you of all other doctors. He must think you the most skillful man available. He has paid you the highest tribute he could possibly pay a doctor. Would you so degrade yourself as to ask some one to steal a fee which you have so justly earned from him who has entrusted you with his life?

"The very acme of skill in medicine is diagnosis. Diagnose your case correctly; if you find you need help select that help conscientiously, then look your patient square in the face and charge him an adequate fee for the most skillful service that a doctor could possibly render him."

There is no place in medicine for fee-splitting or the fee-splitter.

ALLEN H. BUNCE, M.D.

REFERENCE

1. J. M. A. Georgia; 20:62-63 (Aug.) 1920.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia

478 Peachtree Street, N. E., Atlanta, Ga.

FEBRUARY, 1942

TUBERCULOSIS IN THE AGED

Dictated by a sense of propriety and discretion, it is perhaps better that one introduce this subject with something of a perspective, or an orientation as to what is meant by the aged. One must not pull down about his ears the calamitous howlings of some good readers when the fourth to the sixth decades are referred to as belonging to those deepening shades of life's span. For obvious, intimate and personal reasons, many essayists must, forsooth, avoid that.

In developing this time-table approach, a comparison of cancer and tuberculosis may be aptly considered. In the vast majority of instances, the invasion by the neoplastic death begins after the age of forty, as this period of life is commonly referred to as the cancer age. On the other hand, the bacillary pestilence usually launches its ugly reign during the adolescent and early adult years. The primal development of clinically significant tuberculosis after the age of forty is relatively uncommon. If a study of the clinical material available is any criterion, sufferers from this disease are relatively rare after the age of seventy-five. By this time these good souls, from one cause or another, have been winged away into the world beyond. One usually sees, therefore, in these latter decades of life, tuberculosis that has been carried over from the earlier years. In one sense then it is the tuberculosis that is aged rather than the host.

To be sure, changes in the host have been brought about by the passing years. These changes weigh heavily in the interplay between resistance and attack. There are organic and structural changes in the tissues of the body. There are changes referable to habits, diet, work, recreation, etc. There are, and probably most important of all, immunobiologic changes which apparently result in an added tolerance or immunity of the host, to the noxious efforts of the parasitic offenders. A complete and accurate assay would demand a studied consideration of the resultant that stemmed from both forces—or changes in these forces—the individual on the one hand, and his disease on the other. The defense mechanism, of whatever degree of efficiency it may be and of whatever components it may be formed, is to be pitted against the invading micro-organisms of whatever virulence or avirulence they may share.

Always to be included in this reckoning, and notably is this true in tuberculosis, are the hazards attendant upon accidental factors. Accidental disseminations, in what appear to be cases with a most favorable outlook, frequently force a tragic denouement. Acute miliary tuberculosis is by no means uncommon in the elderly, but it is usually not recognized. The evidence of its frequency comes largely from the the postmortem room.

By and large the balance of power favors the forces of defense in the aged, and in them the disease pursues its characteristic chronic and indolent course. At any time, and often with startling suddenness, acute or even explosive manifestations may occur, and death quickly follow. The cause of death in such instances is often attributed to pneumonia or to some acute cardiac mishap; and this is almost invariably so when the tuberculosis in these individuals is unsuspected, as is so often the case.

Undoubtedly, the modern treatment of tuberculosis, with particular emphasis on collapse therapy, is causing more tuberculosis sufferers to live longer and to come into these later age brackets. Of course, due credit is to be given to other advances along the whole scientific and industrial front which are making for prolongation of life. Another cause for encountering the disease late in life is a type of the disease itself. This form of tuberculosis, the chronic productive, begins at or near the apex and gradually, over a period of many years, browses down through the lungs. When established only in matured adult life, advanced years will usually have been reached before the terminal exhaustion of this type gently rings down the curtain.

The clinical course of tuberculosis in the

aged, as has been mentioned, is characteristically a mild and benign one. It often masks as a chronic bronchitis or an asthmatic bronchitis. Herein lies the tragedy, for these unsuspected and unbridled cases of open tuberculosis constitute one of the most prolific sources of spread; they are carriers. The known open case of the far advanced consumptive, while a most decided public menace—and this enhancingly so when the individual is the careless or indifferent type—the danger is far greater in the unsuspected spreader. One can more readily avoid the goring horns of the bull, that formidably and noisily roams the pasture, than one can escape the lethal fangs of the coiled serpent lurking hidden beneath the brush.

Due to the chronicity of the diseased process and to the long interval that often occasions before the correct diagnosis is made, the pathologic picture of the tuberculosis in the aged is usually very extensive. Large cavities, pneumonic consolidations and extensive fibrosis are frequently encountered. Fibroid phthisis seems to predominate and, in view of the fact that a tendency to fibrosis of the tissues is a characteristic of advancing age, this is readily understood.

Rigidity of the thorax, kyphosis and scoliosis, retraction of the apices, widening of the interspaces, rotation and twisting of the heart and mediastinum and varying degrees of emphysema, are associated findings very commonly observed. Because of these latter features, together with the degenerative disorders of the cardiovascular-renal system that are so often present, the employment of collapse therapy in the aged should be entertained only with considerable caution and after serious deliberation. In spite of some statistical surveys to the contrary, it is pretty generally believed that they tolerate it poorly.

As before stressed, the symptoms in tuberculosis of the aged are exceptionally mild and few. Because of the decreased sensibility of the bronchial mucous membrane, there is less cough. Night sweats are infrequent, due to the atrophy of the sweat glands. As true with other diseases in the aged, a large proportion of these patients have little or no fever. Dyspnea, and even cyanosis, are, however, rather common. Probably due to swallowed sputum and amyloid changes, diarrhea is a troublesome symptom of some frequency in these old subjects.

Because of the mildness or paucity of characteristic symptoms, because of the long protracted course with little obvious effect on the general health; and, finally, because of the difficulty in eliciting the cardinal physical signs in these rigid emphysematous chests, the diagnosis of tuberculosis is not made in an astoundingly large number of these patients. The history and physical examination not only offer little aid but they are usually misleading. Chief reliance in this group—and as a matter of fact in other groups as well—is to be found on the x-ray and sputum examinations. With the exception of those patients who have only a residual fibrosis, the sputum specimens usually contain the tubercle bacilli in abundance. The proper diagnosis is extremely important, not so much for these patients themselves but for the protection of those innocents to whom they pass on their infection. When history is done, surely one of the most grim, ironic and tragic chapters will be the reckoning of the untold thousands of young children infected with tuberculosis by their fondling uncles, aunts and grandparents.

Champ H. Holmes, M.D.

MEETING OF SOUTHEASTERN SURGICAL CONGRESS

The Thirteenth Annual Assembly of the Southeastern Surgical Congress will be held at the Biltmore Hotel, in Atlanta, on March 9-11. This meeting will carry out the usual form of post-graduate study but the papers are particularly related to the War Emergency. Among the speakers will be Dr. Fred Rankin, President-elect of the American Medical Association, whose subject will be, "The Medical Profession and War Duties." Mr. Paul V. McNutt, Federal Security Administrator, and Col. Leonard G. Rowntree, Chief of the Medical Division of the Selective Service System, Washington, D. C. We hope to have some representative of the Procurement and Assignment Bureau in Washington to tell just what the Federal Government expects of the medical profession.

Make your hotel and Pullman reservations early.

Address any inquiries to Dr. B. T. Beasley, 701 Hurt Bldg., Atlanta. The detailed program will be mailed about March First.

BOOK REVIEWS

Arthritis in Modern Practice: The Diagnosis and Management of Rheumatic and Allied Conditions, by Otto Steinbrocker, B.S., M.D., Assistant Attending Physician and Chief Arthritis Clinic, Bellevue Hospital, Fourth Medical Division, New York City, with chapters on Painful Feet, Posture and Exercises, Splints and Supports, Manipulative Treatment and Operations and Surgical Procedures by John G. Kuhns, A.B., M.D., F.A.C.S., Chief of the Orthopedic and Surgical Service, Robert Breck Brigham Hospital, Boston. Cloth. Price $8.00. pp. 606, with 321 illustrations. Philadelphia and London: W. B. Saunders Company, 1941.

A remarkably compact presentation of the present-day knowledge concerning the diagnosis and treatment of the various forms of arthritis and allied diseases. The book is well written, easy to read, with adequate discussions, but no unnecessary material. The author has evidently attempted to include all that is actually known about these conditions and all that is proved to be useful. He has included very full references at the end of every chapter. Especially should be mentioned the charts for differential diagnosis, the chapter on the use of pain as an aid to diagnose and an indication for treatment, and a special chapter on local and regional injections for the relief of pain, 70 pages with 39 illustrations. The instructions and illustrations are full but will probably be of more use to a person already trained in this method of treatment rather than to an amateur. Five chapters of the book, written by Dr. J. G. Kuhns, deal with painful feet, posture and exercises, splints and supports, manipulative treatment and operations and surgical procedures. These chapters form a valuable complement to those written by Dr. Steinbrocker. This book should be valuable for students, for practitioners, and for specialists in hospitals and clinics who wish to compare their own work with those of others.

HAL M. DAVISON, M.D.

Nutritional Deficiencies: Diagnosis and Treatment, by John B. Youmans, A.B., M.S., M.D., Associate Professor of Medicine and Director of Post-graduate Instruction, Vanderbilt University Medical School, Nashville, Tennessee. Assisted by E. White Patton, M.D. 385 pages and 16 illustrations. Philadelphia; J. B. Lippincott and Co. 1941.

This book on the diagnosis and treatment of nutritional deficiencies is a worthwhile contribution by a man well known for his wide clinical experience in this rapidly progressing field. He has prefaced it as an attempt "to bring together in a useful and critical fashion" the widespread information of nutritional deficiencies for better understanding and a more practical purpose. The author recognizes the rapid progress being made in this field and realizes how changes and new developments will occur between the time of writing and publishing a book of this type.

A large part of the book is devoted to the various vitamins, but it also includes a discussion of the deficiencies of other essential food factors, such as calcium, iron, iodine, proteins, fats and trace elements. There are thirteen chapters arranged in logical order. For each deficiency there is a clear and concise discussion of the nature, function, dietary source, pathology, clinical expression, diagnosis and treatment. Treatment is classified as preventive, protective and curative.

In the latter part of the book there is given an excellent tabular summary of the vitamins, a section giving the principal dietary sources of the essential food factors and also a section devoted to the laboratory methods for diagnosing deficiency diseases. Out of the enormous and growing literature the few references given are well chosen.

To anyone interested in the various fields of medicine or nutrition this book of Dr. Youmans can be recommended. It is easily readable.

JAMES N. BRAWNER, JR., M.D.

Encephalitis — A Clinical Study.
By Josephine B. Neal, A.B., M.D.
Collaborators: Lauretta Bender, M.D.
Helen Harrington, M.D., Ralph S. Muckenfuss, M.D.
Tracey Putnam, M.D., Albert A. Rosner, M.D.
Lewis D. Stephens, M.D.
Grune & Stratton, New York
1942.

Dr. Neal's book on encephalitis is a work made possible by a grant from the Wm. J. Matheson Commission for encephalitis research. Dr. Hubert S. Howe, in a foreword, states that Dr. Neal has made a special study of encephalitis since 1918 and has had under her direction over 700 patients afflicted with this disease and that for eleven years she has given her personal supervision to these patients. Dr. Howe also states that "no other individual has ever had such extensive experience with encephalitis, and in this book we have the benefit of her observations and study."

In Chapter 1 there is a general discussion of, and description of several types of encephalitis that are due to the infection of the brain by viruses, or by different strains of the same virus. In this chapter she considers, in a general way, epidemic encephalitis—St. Louis type encephalitis, Japanese encephalitis, human encephalitis caused by viruses of Eastern and Western equine encephalomyelitis, verno-aestival tick-borne encephalitis, Australian X-disease, lymphocytic choriomeningitis, louping-ill, the Guillain-Barre syndrome, toxoplasmic encephalomyelitis and hemorrhagic encephalitis. One can see from the above headings how thorough has been Dr. Neal's study of the various types of encephalitis due to virus infections. In chapter IV the clinical course of epidemic encephalitis is lucidly described. In chapters V and VI the treatment of encephalitic symptoms are amply considered. In the book there is also a splendid description of the pathology of encephalitis, together with the psychiatric and neurologic syndromes frequently seen. Postencephalitis behavior disorders in childhood are also considered. There is a splendid description of the encephalopathies, or low-grade inflammatory conditions of the brain due to various toxins which are now considered non-infectious in origin.

JAS. N. BRAWNER, M.D.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

THE HEALTH FILM PROGRAM

The annual report of the Division of Health Education of the Georgia Department of Public Health states that 280 health films were shown 1,218 times to an estimated total of 239,486 persons during 1941. For the last quarter of the year, the figures were 118 films shown 571 times to 116,755 people.

This information is of especial interest to the Medical Association of Georgia and the Woman's Auxiliary of the Association because, as of Oct. 1, 1941, these organizations became active partners with the State Health Department in that part of the health education program which provides health information—as movies—to the lay public. This three way partnership operates as follows: The Medical Association purchases the projectors which are used by its members and the Woman's Auxiliary in showing films bought and distributed by the Association and the Health Department. These films are selected jointly by members of the Medical Association and the Health Department.

Roughly 25 per cent of the audiences who have seen health films in Georgia during the last three months of 1941 saw them under the auspices of the Woman's Auxiliary of the Medical Association of Georgia. While this record is no cause for stultifying complacency, it certainly is one for genuine satisfaction in an undertaking which is only in its infancy. The ladies are to be congratulated for what they have already accomplished. New films on an expanded and timely range of subjects are being procured. These should give continued new interest and vitality to the program.

Justin Andrews, Sc.D.,
Interim Director,
Division of Health Education,
Georgia Department of Public Health.

HEXYLRESORCINOL SUBSTITUTED FOR CHENOPODIUM

The use of carbon tetrachloride and, presumably, of tetrachlorethylene for the removal of hookworms in the presence of the large roundworm, *Ascaris*, is attended by some special hazard due to the anterior migration of the ascarids unless they are narcotized or killed by some other agent. For some years, the Georgia Department of Public Health has gratuitously supplied physicians with oil of chenopodium to be used for this purpose in conjunction with hookworm anthelminthics. While these combinations are highly effective, they are not without some element of danger, especially to the young and undernourished. This is due to the ascaridol content of chenopodium, the irritant, neurotoxic, and depressive effects of which are well known.

Accordingly, it is proposed that hexylresorcinol be substituted hereafter for oil of chenopodium in treating combined infections of hookworm and roundworm. It will be dispensed in 0.2-gram hard-gelatin capsules ("crystoids"). The dosage for adults is 1 gram (5 crystoids), for children from 6 to 10 years of age 0.8 gram (4 crystoids) and for younger children 0.6 gram (3 crystoids). The drug is administered in early morning on an empty stomach. Preliminary saline purgation the night before treatment is desirable—though not essential—as the presence of organic material in the bowel interferes to some extent with the anthelminthic efficiency of hexylresorcinol. The patient may go about his usual daily routine after treatment. Water may be taken freely but food is withheld for 5 hours. Saline purgation may be given the following morning to hasten the expulsion of worms. There is no known contraindication to this drug. The only caution to be emphasized is that the pills must be swallowed *whole* without cracking or chewing in the mouth as this will cause superficial, annoying burns to

(Continued on page 77)

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1941

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Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga.. Telephone: WAlnut 8911

VOLUNTEER SERVICE IN RELATION TO NURSING AND HOSPITALS

LUCY HARRIS, R.N.
Atlanta
President, Georgia League of Nursing Education

The training of volunteer workers in hospitals is a relatively new venture in Georgia. The first project was started in Savannah about a year ago. More recently classes have been organized in seven other chapters, including Atlanta. On February 1, thirty-eight certificates had been issued and approximately one hundred students were enrolled. Other chapters were scheduled to start similar courses in February. This training is undertaken by the Red Cross in cooperation with local hospitals at the request of the Office of Civilian Defense. The purpose is to train volunteer nurse aides so that in case of an emergency such as an epidemic or an air attack, these volunteers will be ready because of actual experience in a hospital to assist in the care of patients. The volunteer nurse aide always works under the supervision and as an assistant to the nurse, thus releasing the nurse for services which only she is competent to perform.

The qualifications for applicants for these courses are a high school education or its equivalent, and good health. They must be between the ages of 18 and 50 and have passed a careful physical examination.

The course consists of 35 hours class and 45 hours supervised practice in the wards of a hospital, covering a period of six weeks, followed by 150 hours of service in a hospital or clinic each year. Hospitals used as training centers must be on the approved lists of the American Medical Association and the American College of Surgeons. The classes consist of lectures, demonstrations and practice, and are taught by a qualified registered nurse. The 45 hours of supervised practice in the hospital are divided into fifteen 3-hour periods arranged by the Red Cross Nurse Instructor and hospital officials. The 15-hour periods are divided into four or five sections so that each volunteer nurse aide is given experience on several services. At the end of the six weeks' theory and practice each volunteer is assigned to one department in the hospital to give her 150 hours of service. This service may be arranged in a variety of ways just so a minimum of three hours is given at one time.

The Office of Civilian Defense has asked that 100,000 women be given this training. The value of this training should not be counted merely in terms of what these workers may do in time of an epidemic or disaster. Both the hospital and the volunteer benefits from this experience. The hospital benefits not only from the service but of even more importance it benefits because workers get an insight into the aims and ideals of the hospital that they could have gotten in no other way. As one of the volunteers expressed it, "I have a better understanding of what hospitals are trying to do. My respect for doctors and nurses has increased tremendously because I never quite realized before how much responsibility rested upon them and how much they want to give their very best to their patients. Before seeing them at work and working with them I thought they were sometimes cold and unconcerned. Now I realize that what I interpreted as such was only a calm exterior covering a very warm and sympathetic heart." These volunteer nurse aides, because of their experience, will be better prepared to keep well and to help their families keep well. They realize as never before the importance of sound practices of hygienic living. They will be better prepared to care for their own families in time of illness and perhaps most important of all, more aware of the needs of the less fortunate.

The volunteer nurse aides have been stimulating to hospital workers by their enthusiasm, and eagerness to learn and to be of service. Let us hope that this plan will not be dropped when the war is over but that every woman who has the time, be given the opportunity for this experience.

The American Medical Association sponsored a Conference on Medical Service Plans, which was held at the Palmer House, Chicago, February 14.

WOMAN'S AUXILIARY : OFFICERS 1941-42

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Historian—Mrs. Ralph Freeman, Hoschton.

Mrs. Howard's Message

"To aid in National Defense by a well-rounded program of auxiliary service" is even more appropriate today than when it was chosen as the goal sought through our objectives for 1941-1942.

Auxiliary members throughout the State are working in many different phases of defense work, all of which are important. However, we must not forget that our own particular program of work emphasizing "health through education" is more important today than ever. Really we began defense work many years ago and now is not the time for us to lessen our efforts but to increase them.

Health of mind and body is one of the vitally necessary things to consider in any defense program. The very fact that so much stress is laid upon this in the selection and care of our armed forces shows that our government feels its importance. The health of our civilian population is of equal value. Let us intensify our efforts to carry on and further develop our program.

Baldwin County

The Woman's Auxiliary to the Baldwin County Medical Society held a recent meeting at the home of Mrs. L. P. Longino in Milledgeville. Mrs. Richard Binion, president, presided. The members sang the national anthem and Mrs. C. H. Richardson gave the opening prayer. Col. Kyle T. Alfriend talked forcefully on world conditions, with special emphasis on the part to be played by the United States. He urged every loyal American to be alert to his personal share in the defense of the country. Mrs. Edgar Long and Mrs. Max Noah, guests, gave a beautiful musical program. A social period followed.

Fulton County

The Woman's Auxiliary to the Fulton County Medical Society held its January meeting in the beautiful new Academy of Medicine on West Peachtree Street in Atlanta. Mrs. Murdock Equen, president, presided and routine reports were given. Dr. Sam Guy, head of the department of chemistry at Emory University, made a most interesting talk on the part chemistry and science is playing in the war, telling of plastics and many other substitutions that had been perfected. Later a delightful luncheon was served with Mrs. O. H. Matthews, chairman, and members of the courtesy committee in charge.

The new Academy of Medicine was dedicated with impressive exercises on December 15. The Woman's Auxiliary had charge of serving a delicious turkey dinner to 500 guests and members, Mrs. Eustace Allen, Mrs. Crawford Barnett, Mrs. Hal Davison and Mrs. W. W. Anderson, ably assisted by their committees, having charge. Mrs. Murdock Equen, president, and various chairmen from the Auxiliary, assisted the Fulton County Medical Society with the decorations and equipping of the new building.

Doctor's Day

Various Auxiliaries over the State will observe Doctor's Day on March 30, this occasion being one on which members of the profession, both living and dead, are honored. A Georgia woman, Mrs. C. B. Almand, of Winder, first originated Doctor's Day and it was first observed by her Auxiliary, that of Barrow County, with Mrs. Ernest R. Harris as president, in 1933. In 1934 the State Auxiliary adopted the idea and in 1935 through the efforts of Mrs. J. Bonar White, of Atlanta, then national first vice-president, the Woman's Auxiliary to the American Medical Association, accepted it.

March 30 is particularly appropriate as the date on which to honor members of the medical profession as it was on March 30, 1842, that Dr. Crawford W. Long, eminent Georgia physician and surgeon, administered the first ether anesthetic at his office in Jefferson. His home, in which he had his office, has been torn down but a marker notes the spot where he first gave his great contribution to mankind. Mrs. Y. Harris Yarbrough, of Milledgeville, is state chairman of Doctor's Day and she urges all Auxiliaries in the State to mark the occasion. The observance calls for some act of kindness, gift or tribute to the medical profession.

Notes on Exhibits

Mrs. Charles S. Mulherin, of Augusta, chairman of exhibits for the Woman's Auxiliary to the Medical Association of Georgia, has issued the following interesting message to members:

"The time has come to start thinking of the State Convention. This year we are very anxious to have an exhibit display to represent every auxiliary in the State. Never before have we had a more opportune time to present health programs and aid in defense work, so let your ex-

hibit reflect your Association's most interesting and valuable contribution to our program. The national chairman of exhibits urges that the exhibit be in the form of a poster, map, diagram or some other plan that will quickly catch the eye of the judges. There will be awards given for the best scrapbook and also the best exhibit.

"Suggestions are made in the list of exhibits at the last national convention:—scrapbooks, must be for the current year not containing clippings and material from past year; posters on legislation; posters showing growth, history, activities and progress; poster of activities; posters of objectives; revolving cylinder with posters of activities; pastel map poster of objectives; loose leaf book on medical economics; newspaper; history; soap carvings of a Hall of Fame of doctors and men like Pasteur with cards of explanation; radio program; Braille exhibit; layette, garments made by members; photograph of old medical instruments with history; teaching kits; book of 'Mother Goose on Quacks' (original); wood plaques with raised lettering on Student Loan, Tuberculosis, etc.; steeple chase illustrating struggle of basic sciences against the diploma mill; and papers on Research in Romance of Medicine."

COUNTIES REPORTING FOR 1942

Clayton-Fayette Counties Medical Society

The Clayton-Fayette Counties Medical Society announces the following officers for 1942:

President—J. R. Wallis, Lovejoy
Vice-President—T. J. Busey, Fayetteville
Secretary-Treasurer—Y. R. Coleman, Jonesboro

Tift County Medical Society

The Tift County Medical Society announces the following officers for 1942:

President—Robert E. Jones, Tifton.
Vice-President—Ester L. Evans, Tifton
Secretary-Treasurer—A. G. LeRoy, Tifton
Delegate—C. S. Pittman, Tifton
Alternate Delegate—M. F. Shaw, Tifton

Douglas County Medical Society

The Douglas County Medical Society announces the following officers for 1942:

President—Thomas B. Taylor, Douglasville
Vice-President—R. E. Hamilton, Douglasville
Secretary-Treasurer—C. V. Vansant, Douglasville

Tri County Medical Society
(Calhoun, Early, Miller Counties)

The Tri County Medical Society announces the following officers for 1942:

President—C. K. Sharp, Arlington
Secretary-Treasurer—W. H. Wall, Blakely

Richmond County Medical Society

The Richmond County Medical Society announces the following officers for 1942:

President—J. Z. McDaniel, Augusta
Secretary-Treasurer—H. P. Harrell, Augusta

South Georgia Medical Society
(Berrien, Clinch, Cook, Echols, Lanier, Lowndes Counties)

The South Georgia Medical Society announces the following officers for 1942:

President—T. C. Williams, Valdosta
Vice-President—L. R. Hutchinson, Adel
Secretary-Treasurer—Ashley Bird, Valdosta
Delegate—W. W. Turner, Nashville
Alternate Delegate—H. W. Clements, Adel

Dougherty County Medical Society

The Dougherty County Medical Society announces the following officers for 1942:

President—P. L. Hilsman, Albany
Vice-President—F. E. Thomas, Albany
Secretary-Treasurer—I. M. Lucas, Albany
Delegate—P. L. Hilman, Albany
Alternate Delegate—J. C. Keaton

Floyd County Medical Society

The Floyd County Medical Society announces the following officers for 1942:

President—Lester Harbin, Rome
Vice-President—Warren Gilbert, Rome
Secretary-Treasurer—Charles I. Harris, Rome
Delegate—Robert Norton, Rome
Alternate Delegate—Edward Bosworth, Rome

Meriwether County Medical Society

The Meriwether County Medical Society announces the following officers for 1942:

President—W. P. Kirkland, Manchester
Vice-President—C. E. Irwin, Warm Springs
Secretary-Treasurer—R. B. Gilbert, Greenville
Delegate—R. B. Gilbert, Greenville
Alternate Delegate—C. Mark Whitehead, Greenville.

Whitfield County Medical Society

The Whitfield County Medical Society announces the following officers for 1942:

President—G. L. Broaddrick, Dalton
Vice-President—G. H. Little, Dalton
Secretary-Treasurer—H. J. Ault, Dalton
Delegate—Trammell Starr, Dalton
Alternate Delegate—D. L. Wood, Dalton

Henry County Medical Society

The Henry County Medical Society announces the following officers for 1942:

President—H. C. Ellis, McDonough
Vice-President—A. W. Carter, McDonough
Secretary-Treasurer—E. G. Colvin, Locust Grove
Delegate—R. V. Brandon, McDonough

Rockdale County Medical Society

The Rockdale County Medical Society announces the following officers for 1942:

President—P. J. Brown, Conyers
Secretary-Treasurer—H. E. Griggs, Conyers
Delegate—H. E. Griggs, Conyers

Hancock County Medical Society

The Hancock County Medical Society announces the following officers for 1942:

President—Horace Darden, Sparta
Secretary-Treasurer—H. L. Earl, Sparta
Delegate—C. S. Jernigan, Sparta
Alternate Delegate—E. H. Hutchings, Sparta

Butts County Medical Society

The Butts County Medical Society announces the following officers for 1942:
President—B. F. Akin, Jackson
Secretary-Treasurer—R. L. Hammond, Jackson

Emanuel County Medical Society

The Emanuel County Medical Society announces the following officers for 1942:
President—J. H. Chandler, Swainsboro
Vice-President—D. D. Smith, Swainsboro
Secretary-Treasurer—R. C. Franklin, Swainsboro
Delegate—J. H. Chandler, Swainsboro
Alternate Delegate—R. C. Franklin, Swainsboro

Taylor County Medical Society

The Taylor County Medical Society announces the following officers for 1942:
President—Lewis Beason, Butler
Vice-President—S. H. Bryan, Butler
Secretary-Treasurer—R. C. Montgomery, Butler
Delegate—R. C. Montgomery, Butler

Hall County Medical Society

The Hall County Medical Society announces the following officers for 1942:
President—C. G. Butler, Gainesville
Vice-President—B. B. Chandler, Gainesville
Secretary-Treasurer—H. H. Lancaster, Gainesville
Delegate—L. G. Neal, Cleveland
Alternate Delegate—W. C. Kennedy, Talmo

Mitchell County Medical Society

The Mitchell County Medical Society announces the following officers for 1942:
President—J. C. Brim, Pelham
Vice-President—J. G. Crovatt, Camilla
Secretary-Treasurer—D. P. Belcher, Pelham.
Delegate—J. C. Brim, Pelham
Alternate Delegate—J. G. Crovatt, Camilla

Wayne County Medical Society

The Wayne County Medical Society announces the following officers for 1942:
President—J. A. Leaphart, Jesup
Secretary-Treasurer—A. J. Gordon, Jesup

Dooly County Medical Society

The Dooly County Medical Society announces the following officers for 1942:
President—L. H. Bishop, Unadilla
Secretary-Treasurer—M. L. Malloy, Vienna
Delegate—E. B. Davis, Byromville

Warren County Medical Society

The Warren County Medical Society announces the following officers for 1942:
President—H. B. Cason, Warrenton
Vice-President—F. L. Ware, Warrenton
Secretary-Treasurer—A. W. Davis, Warrenton
Delegate—F. L. Ware, Warrenton

Bulloch-Candler-Evans Counties Medical Society

The Bulloch-Candler-Evans County Medical Society announces the following officers for 1942:
President—R. L. Kennedy, Metter
Vice-President—John Mooney, Statesboro
Secretary-Treasurer—W. E. Simmons, Metter
Delegate—A. J. Mooney, Statesboro
Alternate Delegate—C. E. Stapleton, Groveland

OFFICE OF CIVILIAN DEFENSE

WASHINGTON, D. C.

To the Editor:

President Roosevelt has appointed Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense, to be a member of the Health and Medical Committee of the Office of Defense Health and Welfare Services. Dr. Irvin Abell, Louisville, Kentucky, chairman of the Committee on Medical Preparedness of the American Medical Association, is chairman of the Health and Medical Committee and other members are the Surgeon General of the U. S. Army, Major General James C. Magee; the Surgeon General of the U. S. Navy, Rear Admiral Ross T. McIntire; the Surgeon General of the U. S. Public Health Service, Dr. Thomas Parran, and the chairman of the Division of Medical Sciences, National Research Council, Dr. Lewis W. Weed, Baltimore. The Office of Defense Health and Welfare Services is a part of the Office for Emergency Management which in turn is part of the Executive Office of the President. The director of the ODHS is Paul V. McNutt, who is also Federal Security Administrator.

NEWS ITEMS

THE MEDICAL AND SURGICAL STAFF of the Georgia Baptist Hospital, Atlanta, held its annual banquet in the dining room of the hospital January 20. Dr. Hal M. Davison was elected president of the staff; Dr. H. W. Minor, first vice-president; Dr. M. C. Pruitt, second vice-president; Dr. B. L. Shackleford, secretary-treasurer; Dr. George W. Fuller was elected to membership on the Executive Board.

THE GEORGIA MEDICAL SOCIETY, Savannah, met on January 27. Dr. Samuel C. Ingraham read a paper entitled *Typhus Control Around Savannah;* Dr. Chas. Usher reported a case, *Vesico-Vaginal Fistula.*

THE BIBB COUNTY MEDICAL SOCIETY met on January 20 at the Baconsfield Club House, Macon. Major Henry J. John was the principal speaker.

THE STAFF meeting of the Emory University Hospital met on February 3. The program consisted of a discussion on *Acute Occlusion of Popliteal Artery* by Dr. F. G. Hodgson, Dr. D. Henry Poer, and Dr. C. W. Strickler. *Pharmacology of Some of the Newer Drugs* was discussed by Dr. E. L. Jackson.

DR. T. F. ABERCROMBIE, State Department of Public Health, appointed chairmen of Emergency Medical Units for each Congressional District as follows: FIRST DISTRICT—Dr. Abe J. Davis, Swainsboro. SECOND DISTRICT—Dr. Guy V. Rice, Albany. THIRD DISTRICT—Dr.

H. T. Adkins, Americus. FOURTH DISTRICT—Dr. W. D. Cagle, Griffin. FIFTH DISTRICT—Dr. R. Floyd Payne. Atlanta. SIXTH DISTRICT—Dr. J. D. Applewhite, Macon. SEVENTH DISTRICT—Dr. R. B. Griffin, Marietta. EIGHTH DISTRICT—Dr. J. D. Stillwell, Waycross. NINTH DISTRICT—Dr. W. B. Harrison, Gainesville. TENTH DISTRICT—Dr. W. W. Brown, Athens.

THE FULTON COUNTY MEDICAL SOCIETY met on January 19 in the new Academy of Medicine, 875 West Peachtree St., Atlanta. Dr. E. Van Buren spoke on *Observations on Newer Treatments of Hemophilia;* discussed by Dr. George Lewis and Dr. Mark S. Dougherty, Jr. Dr. J. D. Martin, Jr., spoke on *Treatment of Burns;* discussed by Dr. Wm. G. Hamm and Dr. Olin S. Cofer.

THE VISITING STAFF of Grady Hospital, Atlanta, met on February 10. Dr. H. S. Weens spoke on *Roentgenological Aspects of Esophageal Lesions.* Officers were elected for 1942.

THE EYE PATHOLOGICAL LABORATORY of Grady Hospital was formally opened on February 12. "The laboratory was made possible by the generosity of Mr. L. F. Montgomery." The facilities of this laboratory are open to all physicians in Georgia who limit their practice to diseases of the eye.

OBITUARY

Dr. Gustave V. Canning, Athens; member; University of Georgia School of Medicine, Augusta, 1891; aged 71; died on January 3, 1942. He was a native of Flowery Branch. He had resided in Athens for more than thirty years. Was a leader in the medical profession and a member of the Baptist church. Surviving him are one son, Harrell Canning, Athens; two sisters, Mrs. R. L. Patterson, Athens; and Mrs. William Wills, Moultrie. Dr. J. C. Wilkinson and Dr. Harvey C. Holland officiated at the funeral services. Burial was in Oconee Hill cemetery.

Dr. S. Thomas Ellis, Claxton; member; University of Georgia School of Medicine, Augusta, 1892; aged 73; died on January 13, 1942. He was a native of Augusta, moved to Waynesboro, then Louisville and later to Claxton. Dr. Ellis was a member of the Board of Directors of the Bank of Claxton, steward in the Methodist church and continuously interested in the upbuilding of the community and other civic work. Surviving him are his widow, three sons, Carl Ellis, Willacoochee; S. T. Ellis, Jr., and Louis Ellis, Hagan. Rev. Chas. G. Earnest, Rev. John S. Lough and Rev. Geo. Partin officiated at the funeral services conducted from the Methodist church.

Dr. Berry W. Fite, Resaca; member; Southern Medical College, Atlanta, 1887; aged 80; died January 13, 1942, of heart disease. He was a native of Gordon county. Dr. Fite received his high school education at Sumach Academy in Murray county. After he graduated in medicine, he served as an intern at Bellevue Hospital, New York. He practiced medicine and surgery in Gordon county for more than fifty years. Dr. Fite has been credited with being the first to use diphtheria antitoxin, typhoid vaccine, anti-rabies treatment and the use of antiseptics in obstetrics in Gordon county. Surviving him are seven daughters, Mrs. Mino Joe Ward, Atlanta; Mrs. J. J. Robertson, Resaca; Mrs. W. A. Neal, Calhoun; Mrs. A. B. Cannon, Atlanta; Mrs. Bob Moore, Calhoun; Mrs. Rufus Neal, Calhoun; and Miss Daisy Fite, Resaca; six sons, Baxter B. Fite, Resaca; B. W. Fite, Tennga; Charley T. Fite, Resaca; F. McRae Fite, Long Beach, Calif.; Rev. Clifton E. Fite, Weatherford, Okla.; Joseph B. Fite, Washington, D. C. Dr. Warren G. Cutts, Rev. W. B. Bridges and Rev. W. H. Gardner officiated at the funeral services conducted at the First Baptist church. Burial was in Fain cemetery.

Dr. Alton Bowie Reddick, Sylvania; member; University of Georgia School of Medicine, Augusta, 1911; aged 56; died on January 13, 1942, in a private hospital in Atlanta. With the exception of the time served in the Medical Corps of the U. S. Army during the World War, his entire professional service was rendered in Screven and adjoining counties. He served three terms as Mayor of Sylvania. Dr. Reddick was a member of the F. & A. M. and the Friendship Baptist church. Surviving him are his widow, and one son, Alton Reddick, a student at the University of Georgia School of Medicine. Rev. P. I. P. Edenfield and Rev. W. F. Chambliss officiated at the funeral services.

Dr. R. J. Clower, Morven; member; Emory University School of Medicine, Emory University, 1895; aged 69; died on January 12, 1942. He was a native of Lanier county. After he graduated in medicine, he moved to Morven and practiced there until disabled. Dr. Clower was one of the leading practitioners in Brooks county, and one of the State's best citizens. He was a member of the F. & A. M. and the Methodist church. Surviving him are his widow, two sons, E. J. Clower, Atlanta, and Tim B. Clower, State Veterinarian; two daughters, Mrs. Mary Suber, Homestead, Fla., and Miss Margaret Clower, teacher in the public schools of LaGrange. Rev. H. S. Brooks officiated at the funeral services conducted at the Methodist church. Burial was in Morven Campground cemetery.

Dr. J. B. Bagley, Waresboro; member; Emory University School of Medicine, Emory University, 1894; aged 76; died December 30, 1941. He was a native of Ware county. His practice in Ware and adjoining counties endeared him to hundreds of friends. Surviving him are his widow and one daughter, Mrs. Tray McClellan, Brunswick. Funeral services were conducted in the home. Burial was in Rehobeth cemetery.

Dr. E. Newton Campbell, Americus; College of Physicians and Surgeons, Keokuk, Iowa, 1879; aged 92; died December 31, 1941. He was a native of Harris county and had resided in Americus for 22 years. He had hundreds of friends. Surviving him are his widow, two daughters, Miss Odura Campbell, and Miss Duane Campbell, all of Americus. Dr. J. B. Lawrence officiated at the funeral services conducted at the graveside. Interment was in Oak Grove cemetery.

Dr. Eugene Leffler Gilmore, Tallapoosa; Marion-Sims College of Medicine, St. Louis, Mo., 1892; aged 73; died November 16, 1941. He was a native of Iowa. Dr. Gilmore was graduated from Cornell University. At one time he was with the Abbott Laboratories, North Chicago, Ill. He had many books on history as well as an excellent library of medical books. Dr. Gilmore had an extensive practice and endeared himself to hundreds of patients and their families. Surviving him are his widow, one sister, Mrs. Carlos Vallejo, Buenos Aires, Argentine, S. A. Rev. R. O. Flynn and Rev. T. J. Espey officiated at the funeral services conducted at the home. Burial was in Hollywood cemetery, Tallopoosa.

ANNOUNCING

ATLANTA CLINICAL SOCIETY LECTURESHIP

Academy of Medicine

875 West Peachtree St., N. E.

March 5, 1942

8:00 P.M.

NUTRITION OF POPULATIONS WITH PARTICULAR REFERENCE TO WAR TIME CONDITIONS

Dr. John B. Youmans

Dr. Youmans, associate professor of medicine and director of post-graduate instruction, Vanderhilt University, Nashville, Tenn.; memher of Rockefeller Foundation Health Commission (formerly Rockefeller Foundation Health Commission to Europe). Dr. Youmans has recently returned from France where he made a study of nutrition.

March 6, 1942

8:00 P.M.

MEDICAL MILITARY OBSERVATIONS IN ENGLAND

Captain C. S. Stevenson, M.C., U. S. N.

Both of these men have had firsthand experience. Captain Stevenson was sent to London to study the problems of effect of bombing on the civilian population as well as other medical conditions during the war.

All members of Fulton County Medical Society, the Medical Association of Georgia and medical students are cordially invited.

AN AWARD OF $1,000

An award of $1,000 to assist the outstanding work done by Irvington House, of Irvington-on-Hudson, N. Y., in the study and treatment of rheumatic fever, has been made by The Borden Company.

The sum was presented recently at a meeting of the directors of the institution hy William Callan, Vice-President of The Borden Company and also a director of Irvington House.

The researches, conducted under direction of Dr. Ann G. Kuttner, Resident Medical Director, with the guidance of a Medical Advisory Board, of which Dr. J. Murray Steele, Director of the Third Medical Division, Welfare Hospital, New York City, is Chairman, have made Irvington House outstanding in this field.

Known as "The House of Mending Hearts," it houses about one hundred young, underprivileged patients. Its work on rheumatic heart disease, and its high standard for the care of patients have hrought to Irvington House great distinction as an experimental heart-saving sanatorium and training center and has brought forth inquiries from as far as South America and Australia on the matter of setting up of convalescent homes for cardiac youngsters.

As an educational spearhead, Irvington House has been particularly energetic in hringing to the attention of the public how great the menace of rheumatic heart disease is. The United States Public Health Service regards this disease as one of the great American perils.

Specialized care and supervised living are provided for many months for underprivileged children afflicted with the ailment, so that they may he fortified in body and spirit to assume their rightful roles as useful citizens.

TRAUMATIC CONDITIONS OF THE WRIST

(Continued from page 66)

If it is not removed, pain and disability continue; also signs of pressure on the median nerve persist.

After a successful reduction of this bone, normal function should return. After removal of the bone, some disability persists for a time but fairly good function will eventually return.

HEXYLRESORCINOL SUBSTITUTED FOR CHENOPODIUM

(Continued from page 71)

the buccal mucosa.

Under this treatment regime, from 90 to 100 per cent of all ascarids will be removed, some 70 to 80 per cent of all patients being completely relieved of their roundworm burden with a single treatment. From 70 to 75 per cent of all hookworms will also be removed. The remainder may be eliminated subsequently (after two weeks) with tetrachlorethylene or with additional courses of hexylresorcinol.

Orders for hexylresorcinol should be addressed to the Georgia Department of Public Health, Atlanta, Georgia, and should clearly specify the amount of drug desired These will be filled only when they are *signed by a physician.*

JUSTIN ANDREWS, Sc.D.,
Director,
Division of Malaria and
Hookworm Service,
Georgia Department of Public Health.

The Medical Association of Georgia will hold its Ninety-Third Annual Session at the Bon Air Hotel, Augusta, April 28-May 1, 1942.

THE NEW ORLEANS GRADUATE MEDICAL ASSEMBLY

The sixth annual meeting of the New Orleans Graduate Medical Assembly will be held March 2 through March 5, headquarters at the Roosevelt Hotel. The popularity which the Assembly has enjoyed at the past meetings gives proof that the program offers the type of intensive post-graduate study the medical profession desires, presenting many new and outstanding features which are of interest to the specialists, as well as the general practitioner.

In keeping with the established policy, eighteen guest speakers will be on the program, each one prominent in medical circles. The Section on Surgery will be represented by two guest speakers, Dr. Frank H. Lahey, President of the American Medical Association, and Col. Norman T. Kirk, Director of Surgery, Army Medical School, Army Medical Center, Washington, D. C. Dr. Lahey has selected as his topics "Lesions of the Terminal Ileum, Colon and Rectum," "Some of the Common and Uncommon Thyroid Problems" and "The Place of Medicine in the Country Today." He will also take part in the Clinico-pathologic Conference. Col. Kirk has chosen very important and timely subjects, namely, "Plan for Evacuation and Treatment of War Casualties," "The Guillotine or Open Amputation" and "The Medical Department Problems in the Present Emergency." Col. Kirk has made the following contributions to medical literature: "Amputations," Lewis Loose Leaf Surgery; "Tetanus and Tetanus Toxoid," Nelson Loose Leaf Surgery; "End Results of 158 Consecutive Autogenous Bone Grafts for Non-union Long Joints," and numerous other publications.

The Section on Medicine will also have two guest speakers, Dr. William H. Sebrell of Washington, D. C., and Dr. William B. Porter of Richmond, Virginia. Dr. Sebrell is Chief of the Division of Chemotherapy, National Institute of Health and Deputy Assistant Director for Nutrition, Office of Defense, Health, Welfare and Related Activities. His talks will be of utmost interest and are as follows: "Nutrition and National Defense," "The Clinical Importance of Vitamin B Complex Deficiencies" and "The Diagnosis of Subclinical Deficiency Disease." Dr. Porter, Professor of the Theory and Practice of Medicine, Medical College of Virginia, will discuss "Acute Pericarditis," "Complications of Staphylococcic Cutaneous Infections," "The Diagnostic Significance of Changes in the Hands" and "The Clinical Syndrome Associated with Intercapillary Glomerulosclerosis."

It would be impossible to enumerate here the names and subjects of all of the essayists but each speaker is among the country's foremost medical educators and their participation in the meeting will play an important part in its success. A complete list of the speakers, together with their specialties, is carried in an announcement in this issue of the journal.

In addition to the lectures many other features will add to the value of the meeting. The numerous scientific exhibits will be of great interest and there will be approximately sixty exhibits on display by ethical manufacturers of drugs and equipment.

It is hoped that many doctors will plan now to set aside a few days from their regular routine and attend the Assembly. The meeting offers an excellent opportunity to combine post-graduate work together with the establishment of good fellowship. The registration fee of ten dollars covers all features, including four daily round-table luncheons.

"IS THIS PRODUCT COUNCIL-ACCEPTED?"

This is the first question many physicians ask the detail man, when a new product is presented.

If the detail man answers, "No," the doctor saves time by saying, "Come around again when the Council accepts your product."

If the detail man answers, "Yes," the doctor knows that the composition of the product has been carefully verified, and that members of the Council have scrutinized the label, weighed the evidence, checked the claims, and agreed that the product merits the confidence of the physicians. The doctor can ask his own questions, and make his own decision about using the product, but not only has he saved himself a vast amount of time but he has derived the benefit of a fearless, expert, fact-finding body whose sole function is to protect him and his patient.

No one physician, even if he were qualified, could afford to devote so much time and study to every new product. His Council renders this service for him, freely. Nowhere else in the world is there a group that performs the function so ably served by the Council on Pharmacy and Chemistry and the Council on Foods.

Mead Johnson & Company cooperates with both Councils, not because we have to but because we want to. Our detail men can always answer you, "Yes, this Mead Product *is* Council-Accepted."

AMERICAN CONGRESS ON OBSTETRICS AND GYNECOLOGY

In this time of stress, there should be a definite interest in the welfare of the mothers and babies of the nation. The Committee which is sponsoring the next American Congress on Obstetrics and Gynecology, to be held in St. Louis on April 6-10, 1942, represents the only organization outside of governmental bodies which has attempted to unite the efforts of voluntary and other agencies to carry out the widely disseminated plans for the care of women and children. Opportunity for the presentation of advances in obstetric and gynecologic knowledge will be afforded to the many groups interested in these problems at a nation-wide gathering of this kind. The Directors of the project believe that, notwithstanding the war situation, the Congress should be held at the stated time and are proceeding with their plans to make of this an outstanding gathering. Further details of the program will be communicated as these are made available. Inquiries may be addressed to the Central Office, 650 Bush Street, Chicago, Illinois.

GEORGE W. KOSMAK, M.D.
Chairman, Committee on
Medical Publicity.

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SYMPOSIUM ON PNEUMOTHORAX

ARTIFICIAL PNEUMOTHORAX REFILLS IN PULMONARY TUBERCULOSIS

C. M. SHARP, M.D.
Alto

The chief objective in the treatment of tuberculosis, from a public health standpoint, is to render sputum negative. Artificial pneumothorax and allied procedures, when successfully employed, have proved of immense value in the therapy of tuberculosis. A variety of collapse measures are employed, but all, with one exception, are performed and completed at the sanatorium before the patient's discharge and, therefore, offer no problems to the physician when the patient returns home. The one important exception is artificial pneumothorax and to a lesser degree, pneumoperitoneum.

The problem associated with artificial pneumothorax is that treatment is instituted in the State Sanatorium at Alto, but we do not have adequate facilities to domicile all pneumothorax patients during the entire course of their treatment. Treatment of any patient is a compromise between the ideal of what one would like to do and what practically can be done. We find it necessary to compromise and keep patients only until the initial objective of the treatment has been secured; that is, the closure of the cavity and the conversion of sputum.

Management of Pneumothorax After First Refill

By the end of the first month, after induction, the refill intervals can usually be increased to about one each week and this can be gradually extended to every ten days or two weeks. It is desirable that any collapse be maintained with as nearly negative pressure as possible although no harm can be expected if slightly positive pressures are used. In patients where adhesions are present, high positive pressure may be indicated in order to stretch the adhesion, to close the underlying cavity, or so that a pneumolysis may be performed if indicated. We believe that the amount of air administered at each refill should not exceed 500 cc. If it is necessary to give amounts exceeding 500 cc. to maintain a satisfactory collapse, we think it is better to administer smaller amounts of air at more frequent intervals.

X-ray and Fluoroscope

We insist that artificial pneumothorax cannot be administered safely or correctly unless the operator has immediate access to fluoroscope and x-ray equipment. It is absolutely essential that all pneumothorax patients be fluoroscoped before each refill. Frequent x-ray examinations for comparative study should be made. The importance of routine fluoroscopy and x-rays are stressed because it is obvious that the tuberculous process, which was present in the lung before collapse was initiated, has not healed in the short interval during which the satisfactory collapse was being obtained. It is necessary in most cases, depending upon the original tuberculous lesion, to maintain the degree of collapse in a rather fixed position for two to three years. It is impossible to do this without fluoroscopy and x-ray. Without these aids, frequent re-expansion of the lung occurs which in turn hampers and may even prevent the healing and encapsulations of the underlying tuberculous process defeating the whole objective of pneumothorax therapy.

From the State Tuberculosis Sanatorium, Alto, Georgia.
Read before the Medical Association of Georgia, Macon, May 15, 1941.

Laboratory Examinations

The sputum, if any, should be examined once each month to determine whether tubercle bacilli are present. If they are consistently present, pneumothorax is not performing the benefits supposed to be derived from it.

The red cell sedimentation rate, in our opinion, is a valuable laboratory test in the management of tuberculosis.

General Management of the Patient

After the institution of pneumothorax, even if symptoms are absent, the patient should be confined to bed at least three months. If, during this period, a satisfactory collapse has been obtained with a conversion of the sputum and absence of signs of toxemia, he may be gradually allowed a small amount of physical activity. If this does not tire him, he may be allowed to attend one meal daily, gradually increasing his activity in the absence of signs of toxicity to 60 minutes' walking exercise daily. When the patient has had 60 minutes' walking exercise daily for two months with an absence of constitutional symptoms, has a negative sputum, a tuberculous lesion stationary, retrogressing, or apparently healed from an x-ray standpoint and without evidence of cavitation, he may be considered as apparently arrested. If the above criteria hold for six months, he is classified as arrested. Even after the disease has become arrested, the patient's activity should be well regimented and we should never forget that we are dealing with a chronic disease.

Duration of Treatment

In our estimation, a satisfactory pneumothorax maintained with conversion of sputum and absence of symptoms should be discontinued after a minimum of two to three years. This period undoubtedly varies with the individual patient, the type of collapse, and extent of the lesion that was present at the time of induction. We feel that it is unfair to the patient and to the treatment to continue an ineffective pneumothorax when we know it is of little benefit to the patient. Merely the ability to introduce air into the pleural space does not justify the continuance of pneumothorax therapy. If, after a reasonable trial period, we find the collapse ineffective, we must consider discontinuing pneumothorax and substituting some other form of collapse therapy that may be more effective. The risk of tuberculous empyema and other major complications is great in an ineffective pneumothorax and there is always the risk of developing new diseases in the contralateral lung, thereby preventing other collapse measures.

Re-expansion

The collapsed lung should be allowed to re-expand slowly, the interval between refills lengthened and smaller amounts of air given at each treatment. During this period, the patient must be observed very closely with frequent fluoroscopic and x-ray examinations to make certain that the underlying diseased areas are healed or that no reactivation of the disease occurs. If such signs present themselves the collapse must be re-established. It is best that the need for discontinuing pneumothorax be predetermined before the lung contacts the chest wall, hence the necessity for frequent examination by fluoroscope, x-ray, and laboratory.

During the course of the re-expansion, pleural effusion frequently develops but in most instances this is of mechanical origin and may be ignored unless it becomes too troublesome, in which case it should be aspirated. The patient may usually remain ambulant. If fever, pain, and other constitutional symptoms should develop, his activity must be curtailed.

Major Accidents Associated with Pneumothorax

There are several major accidents accompanying artificial pneumothorax which prevent it from being the simple procedure some people attach to it. Air embolus is probably the most drastic of these accidents and usually results from lung puncture and occurs most frequently during an initial induction of pneumothorax. The diagnosis is based upon the presence of localized neurologic symptoms, such as blindness, convulsions, and paralysis. The treatment

is primarily one of prevention. One should never introduce air into the pleural space until the manometer shows a correct reading and one must be certain that a blunt needle is used in the initial induction of air. If an embolus should occur, and sudden death does not result, cardiac and respiratory stimulants should be administered to maintain the circulation.

Lung perforation is another condition that occurs most frequently during pneumothorax therapy. The symptoms may be very acute or may consist of only a slight increase in respiration which either gradually or rapidly increases. Cyanosis may be present, its degree depending upon the amount of collapse and the extent of circulatory disturbance. If the collapse is great, the heart may be displaced markedly to the opposite side. If the diagnosis is confirmed by increased manometric readings, clinical symptoms, physical examination, and x-ray, the air should be immediately withdrawn from the pleural space. The amount of air withdrawn and the frequency of withdrawal depend upon the need of the individual patient. Any physician administering pneumothorax should be prepared at any time to remove air when indicated. In some cases where a large opening or bronchopleural fistula is present in the lung or where the air is trapped in the pleural space due to a one-way valve mechanism, it is necessary to allow a pneumothorax needle to remain inserted constantly in the chest wall until the symptoms warrant its removal. Severe cases may require constant suction.

Complications of Artificial Pneumothorax

Pleural effusion is the most frequent complication of artificial pneumothorax. It occurs in over 50 per cent of the patients receiving this type of therapy. In the majority of patients, it is transitory and benign in character offering no particular problem and requiring no special treatment. Some patients, however, show a tendency to build up excessive amounts of fluid. It is this group which presents the problem in pneumothorax therapy. It is our custom at the Sanatorium to aspirate the fluid when it reaches the tip of the third rib. All of the fluid possible is removed and replaced by air. Frequently after one aspiration, the effusion will not form again to an excessive amount. In persistent effusions with constantly reforming fluid, it is our custom to aspirate at frequent intervals and irrigate the space with 1-3300 azochloramid solution. At the conclusion of the irrigation, we instill 100 cc. of the solution into the pleural space. By this method we have been able to clear up numerous cases of persistent pleural effusion. If the effusion continues to reform, it is undoubtedly tuberculous in origin and, if neglected, will develop into a tuberculous empyema.

Tuberculous empyema is the most frequent serious complication of artificial pneumothorax and occurs in approximately 10 per cent of the cases. The diagnosis is based upon the presence of cellular or purulent fluid, each of which show the presence of tubercle bacilli, either by direct smear, concentrated fluid examination, or culture. The treatment of tuberculous empyema is that of a persistent pleural effusion with frequent aspirations accompanied by azochloramid irrigations. If the empyema is still present, after several months of intensive treatment, it is best to discontinue the pneumothorax and try to re-expand the lung. Many authorities advocate thoracoplasty as the most satisfactory treatment of tuberculous empyema but we have had some success at the Sanatorium with the treatment described. We feel that the frequency and persistency with which the treatment is carried out cannot be stressed too much.

Unless there is a bronchopleural fistula, mixed empyema may be treated as tuberculous empyema with some hope of success. We have found it efficacious to irrigate the pleural space with 1-1000 gentian violet solution particularly if the staphylococcus is the offending organism. If a bronchopleural fistula is present, it is always necessary to perform a thoracoplasty before we can hope for recovery.

Pleurocutaneous fistula is usually a complication of tuberculous empyema and the treatment is principally that of prevention. At the conclusion of an aspiration of a

tuberculous empyema, it is advisable to inject the needle tract with an antiseptic solution as the needle is being withdrawn.

If the cavity remains open in the collapsed lung and the sputum continues to remain positive, one is never safe from having an increase of disease into the opposite lung and we do not hesitate to apply bilateral pneumothorax when the increase in the opposite lung is of such a character that it cannot be handled without pulmonary collapse. Bilateral pneumothorax, of necessity, doubles the complications one may expect from the use of pneumothorax but on numerous occasions bilateral pneumothorax has been a life saver. If we are able to render the sputum negative, we are able to a great extent to eliminate increases in the contralateral lung.

One must never forget that pneumothorax is never a simple procedure. Complications are numerous but, if the correct type of patient is selected for this treatment, we feel that it has a very valuable place in the therapy of tuberculosis. Undoubtedly collapse therapy, pneumothorax in particular, has revolutionized the treatment of tuberculosis.

ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF DRY PLEURISY

LINTON SMITH, M.D.
Atlanta

Pleurisy is an inflammation of the pleura. The reaction may be local or extensive, sometimes involving both pleural cavities. There is a difference of opinion at the present time as to whether pleurisy is a disease or is merely a symptom of disease elsewhere in the body, yet we know it produces a definite group of symptoms as well as definite pathologic changes. In almost all acute or chronic diseases of the lungs there is some pleural involvement. Idiopathic pleurisy was recognized by Osler and was formerly frequently diagnosed, but during the past few years careful investigation has shown that a great many such cases are tuberculosis. Pleurisy never causes tuberculosis but tuberculosis is often the cause of pleurisy.

Pain, the most prominent symptom of pleurisy, often masks far more serious, and often widespread, disease or infection, so a diagnosis of pleurisy should never satisfy the clinician. The lower the pleura is affected the more severe is the pain; diaphragmatic pleurisy is excruciatingly painful. Pleurisy is often an early symptom of pneumonia as well as frequently being a late manifestation. Primary cancer of the lung is often followed by pleurisy, and often comparatively early; other underlying causes are rheumatism, septicemia, and extension of disease from adjacent structures; subdiaphragmatic conditions of several kinds; diseases within the mediastinum; infected bronchial lymph nodes and the pericardium. Every case of pleurodynia and intercostal neuritis should be carefully differentiated from pleurisy for the causes are different, and the treatment just as different.

The first duty, and the greatest responsibility of the physician, is to relieve pain. Pain is the chief symptom of pleurisy. The young and robust should be relieved of pain as a simple obligation to humanity; in the patients who are feeble or in poor health, or in the aged, or in those with other diseases, the obligation goes much farther, for the restlessness and consequent loss of sleep and strength cause exhaustion and encourage anoxemia and atelectasis which often precede a pneumonia and frequently myocardial failure and death.

The cause of pain in acute pleurisy is still a controversial subject but the three theories are: the first or friction theory is that pain is caused by the rubbing together of the inflamed parietal and visceral pleurae, thereby causing nerve irritation. This is still accepted by many physicians and there is much ground for this belief, which is supported by the friction sounds and the prompt relief when effusion forms. The second theory is that pain is caused by hyperalgesia of the intercostal muscles but this does not explain the difference in pain on inspiration and expiration; it is chiefly based on the idea that the parietal pleura is insensitive as is the visceral. The third.

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or tension theory, is that the pain is caused by stretching of the parietal pleura. This theory is supported by the fact that immobilizing the chest wall by strapping with adhesive plaster gives relief by preventing the stretching of the parietes. It is also supported by the difference in pain on inspiration and expiration.

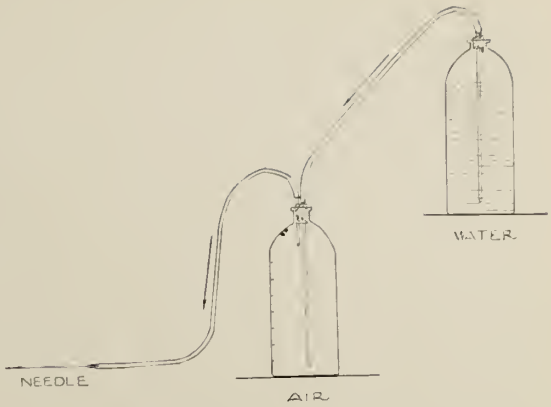
When effusion forms there is almost immediate relief from pain and there are three possible explanations for this: first, is the separation of the inflamed pleurae; another is that the sensory nerves are released from pressure when edema and effusion take place; the third is that the effusion causes the lung to collapse and thereby lessens the stretching of the parietal pleura.

For practical purposes there are no other classifications needed than acute and chronic pleurisy, for it is evident, especially from the point of view of treatment, that any other classification is entirely artificial, for all those conditions are simply different stages in a process of varying degrees of intensity, extent and virulence.

The symptoms of pleurisy are few and often mild and may attract little attention. Pain may be slight or lancinating, sharp and severe and is always aggravated by cough. Fever is moderate and follows the pain: it rarely exceeds 102° F. Cough is an early symptom but is not so severe as in pneumonia and is usually restrained. The patient is inclined to lie upon the affected side. A definite friction rub can be heard on both inspiration and expiration, and holding the breath stops friction sounds.

Friction sounds in conjunction with the pain are positively diagnostic but often superficial pulmonary rales are deceptive. Pleurodynia and intercostal neuralgia are often confused with pleurisy but both can be eliminated from consideration with a little care and a search for their cause. In intercostal neuralgia the pain is increased on bending the body on the affected side but decreases in pleurisy. Pain follows the nerve route in intercostal neuralgia but is not so localized in pleurisy. Pleural friction sounds are absent in both pleurodynia and intercostal neuralgia.

When pleurisy is diagnosed the patient



should be placed in bed and made as comfortable as possible and treated as in any other severe infection, at least until the nature and extent of the condition can be determined. If there is any expectoration of sputum it should be examined repeatedly; complete blood counts will show the extent of leukocytosis and indicate whether pus formation is taking place; x-ray examinations are invaluable when it is possible to have such studies made. Exploratory puncture should be done early and every precaution observed, as when making any paracentesis. A large number of serous pleural effusions are caused by tuberculosis and a high percentage of lymphocytes in the cell count and a failure to obtain a growth of organisms make the diagnosis practically certain, but if a large amount, fifteen cubic centimeters or more, is injected into a guinea pig, absolute proof will usually be furnished. Smaller amounts will not yield such proof. Infarction of the lung, new malignant growths and early lobar pneumonia will usually furnish sterile growths. If the fluid by its pressure causes dyspnea it may be removed immediately but it is common practice to wait until the acute stage has passed. If positive pressure should develop it will be suggested by a high level of dullness, often above the second rib, or the mediastinum will be displaced or the liver pushed down. Too long continued positive pressure will cause the lung to become carnified and re-expansion may be incomplete and the visceral pleura will become greatly thickened. It is not possible to remove all of the fluid in extensive involvement unless a part of it is replaced with some gas, and

at the same time the gas prevents too rapid expansion of the lung.

The most common situations for paracentesis are the sixth spaces in the midaxillary region; the seventh spaces near the posterior axillary line or the eighth spaces just below the scapula.

If pleurisy is complicated with acute diseases, as pneumonia, it adds greatly to the difficulties of treating such diseases, for the patient is unable to breathe with comfort or regularity and as he fills his lungs it is accompanied by a sharp pain which interferes with the proper oxygenation of the blood. The pain also causes the need for more air, for the patient tosses restlessly, and is deprived of much needed rest and sleep. Such pain is poorly relieved by opium as this drug depresses the respiratory center and adds to the already existing anoxemia. In simple dry pleurisy strapping the affected side with adhesive plaster often gives much relief, but in pneumonia this is often contraindicated. Counterirritants are of little value and poultices and hot applications by their weight do much harm by limiting respiratory excursions at a time such action is of vital need. There is a method which is simple and easy and which gives almost immediate relief from pain and is free of the objections to all other forms of treatment: it is the injection of a small amount of air between the parietal and visceral pleural membranes.

Artificial pneumothorax is done by selecting the place where the pain is most severe if practicable; injecting into the skin above the interspace selected a few drops of 1 per cent novocain solution and then forcing the needle deeper and injecting the solution ahead of the needle until the rib is reached, when a larger amount is injected. Then the needle is passed over the top of the lower rib until the parietal pleura is reached, when quite a large amount of the solution is injected because the parietal pleura is very sensitive, especially if already inflamed. Two cubic centimeters of novocain solution are usually used. The needle is now withdrawn and five minutes are allowed for full anesthetic effect to take place. The most painful portion of the chest should be uppermost if convenient, for the injected air tends to rise and it is intended to inject only enough air to separate the inflamed pleural surfaces. If the pleurisy is in the diaphragm or otherwise inaccessible the air may be injected at any place most convenient and the foot of the bed elevated so that gravity will carry the air where it is needed. A 16 or 18 gauge needle, attached to a 10 cc. glass syringe, with the piston withdrawn almost to the top of the barrel, is now introduced through the skin at the site of the previous injection and is pushed through skin and then deeper tissue, taking care to go through the interspace close to the upper border of the lower rib and thus avoid injuring the nerve and blood vessels on the lower borders of the ribs. When the needle goes through the parietal pleura there is a "snap" or a feeling that something suddenly gave way, the same feeling as when going through the dura in making a spinal puncture. When the needle point goes through the pleura negative pressure is encountered and the piston will fall in the barrel with each breath taken. If there is any doubt the piston can be gently pushed upon and then pulled up and if the needle is still in tissue the piston will spring back into place, but if it is in the pleural cavity air will enter easily and can be brought back into the syringe. A water manometer is a refinement in technic and can be attached to the apparatus to measure negative pressure but I am dealing with the simplest possible equipment which can be obtained anywhere as well as used anywhere. On being sure that the point of the needle is in the pleural cavity the syringe is detached from the needle leaving the needle in place and the rubber tube is promptly connected to the needle, and the desired amount of air is introduced. Three to five hundred cubic centimeters of air is the amount that I usually inject, although this is only enough to separate the pleural surfaces very slightly. The patient will often volunteer the information, while air is entering, that he is greatly relieved. If necessary on account of the absorption of air other injections may be made at two to three day intervals. The patient is not removed from bed for this operation and is little disturbed

No.	Initials	Sex	Age	Date	Duration	Number of Treatments	Relief	Effusion	Adhesions
1	S. R. G.	M	48	3/8/38	11 hrs.	3 X	Complete	No	No
2	M. G.	F	21	3/21/38	3 days	2	Complete	No	No
3	I. E. H.	M	31	4/16/38	4 days	3 X	Complete	Yes	No
4	M. G.	F	37	4/27/38	36 hrs.	1	Complete	No	No
5	O. L. C.	F	34	10/7/38	2 days	2	Complete	No	No
6	L. M. S.	F	20	12/1/38	28 hrs.	3 X	Complete	No	No
7	J. W. T.	M	47	12/21/38	2 days	1	Complete	No	No
8	G. J. G.	M	51	1/8/39	3 days	2	Complete	No	No
9	A. G.	M	27	1/14/39	1 day	3 X	Complete	Yes	No
10	M. G. C.	M	33	2/11/39	36 hrs.	1	Complete	No	No
11	A. J. Z.	M	24	3/9/39	2 days	3 X	Complete	No	No
12	T. A. G.	F	19	4/1/39	1 day	1	Complete	No	No
13	G. H. *	M	34	5/27/39	1 day	2	Partial	No	No
14	M. M. T.	M	15	10/3/39	20 hrs.	2	Complete	No	No
15	G. H. C.	F	7	12/9/39	1 day	1	Complete	No	No
16	J. C. C. *	M	11	1/1/40	1 day	2	Partial	No	No
17	P. T. H.	M	12	2/21/40	2 days	3 X	Complete	Yes	No
18	M. A.	F	34	3/26/40	1 day	1	Complete	No	No
19	P. T. F	M	16	11/9/40	2 days	1	Complete	No	No
20	H. B. L.	M	56	12/13/40	4 days	3 X	Complete	No	No

* Obtained complete relief from second dose, indicating that not enough air had been given at first treatment.
x Pneumonia was complication.

by it. I have used only air in the treatment of these patients, which has proved entirely satisfactory.

On several occasions, when no equipment of any kind was obtainable, I have inserted a hypodermic needle in the pleural cavity and have allowed it to remain until enough air had entered to relieve the pain. This method is of course inexact but it will give much relief in an emergency.

The above simple method of doing an artificial pneumothorax is not intended as advice to the highly trained and well-equipped specialist nor is it for use in well-appointed hospitals, but is the simple, satisfactory and often emergency method, used by me when none other is available.

The necessary apparatus consists of a few feet of rubber tubing, a cork and two bottles connected as in the schematic drawing here shown.

There are few dangers in doing an artificial pneumothorax if care is used. Infection can follow the procedure if complete and careful asepsis are not observed. Myocardial distress can be increased if too large amount of air is used. Pleural shock and air embolism are possibilities but are only mentioned so as to avoid them.

In twenty selected cases of acute dry pleurisy only two patients failed to obtain almost immediate relief when air was injected and the two not given relief were made entirely comfortable when another pneumothorax was done, which indicates that not enough air was introduced at the first treatment to entirely separate the inflamed pleural surfaces.

Seventeen patients recovered without any pleural effusion, a much larger percentage than is usual. The time of recovery from the acute disease was also shortened, both of which I attribute to the decrease in inflammation when the pleural membranes were separated. It is a well recognized fact that infection subsides more rapidly when the infected tissues are placed at complete rest and this is accomplished when air is injected into the pleural cavity.

Later examinations of all twenty patients showed that none had any adhesions following the acute inflammation. This good result was probably caused by an earlier than usual termination of the acute infectious process and also the fact that the pleural membranes were separated while acutely inflamed and were restored to a more nearly normal condition before coming into direct contact. This fact alone would more than justify this treatment for many cases are tuberculous and later collapse of the lung

can be performed so much more satisfactorily in the absence of adhesions.

REFERENCES

1. Taylor, A. B.: Use of Artificial Pneumothorax in Treatment of Pleurisy in Pneumonia. Practitioner, London, 759:127.
2. Young, R. A.: Treatment of Pleurisy, Practitioner, London, 769:129.

DISCUSSION ON PAPERS OF DOCTORS LINTON SMITH AND C. M. SHARP

Dr. J. A. Redfearn (Albany): Dr. Smith made a splendid point when he said that "a diagnosis of pleurisy should never satisfy the clinician." It is too often the patient's diagnosis or one by a physician in a desk chair with a prescription pad handy. He pointed out several conditions requiring a differential diagnosis, thus emphasizing the futility of jumping at conclusions. Surely intercostal neuritis has been diagnosed and treated far too frequently.

As to Dr. Sharp's presentation, avoid much positive pressure if negative pressure closes cavities. If adhesions are present then high positive pressure is desirable for closing cavities and stretching adhesions. Dr. Sharp prefers to limit the air given to 500 cc. at a refill. However, we are douhtless justified in giving twice this amount to some large men who are leading active lives, such as farmers who plough several hours daily, filling station operators and basketball referees. I have treated successfully such patients who are heads of families.

It is very unwise to try to give artificial pneumothorax refills without using the fluoroscope. Some doctors give refills and then send their patients to some one else for fluoroscopic and x-ray examinations. I prefer to fluoroscope the patients myself.

I am glad to hear Dr. Sharp say that two to three years is long enough to keep up treatments in patients who have negative sputum examinations and absence of symptoms. Most of my patients in this class have been treated four or five years, mainly because neither of us would fix a date to stop.

Two of my patients during the past year developed bronchopleura fistulas after having had refills almost three years. They both had broad adhesions containing lung tissue. One has lived for six months and is greatly improved. Gentian violet 1-1000 was injected several times, part of which she coughed up and some of which was drawn off at each subsequent treatment. Each patient developed an acute cold and cough and felt a burning sensation in the pneumothorax side of chest, followed by chill and high fever.

Another patient who has been taking pneumothorax bilaterally for three years, and working indoors, developed a throat infection with fever followed hy empyema on one side due to staphylococcus aureus infection. Irrigations by syringe and needle with gentian violet three times during a month sterilized the fluid and he was back at work at the end of six weeks.

Dr. H. C. Schenck (Atlanta): In the discussion of these admirable papers I would like to emphasize the necessity for broad knowledge by those who are giving or expect to give artificial pneumothorax of the indications for it, the purpose of it, the management of it, and its dangers.

Although there are other uses for artificial pneumothorax, its present employment is chiefly as an adjunct in the treatment of selected patients with tuberculosis. In these patients it hastens recovery, but until the lesions have become arrested it does not take the place of bedcare. Again, in suitable open cases the sputum may be quickly rendered free of tubercle bacilli hy it. About 40 per cent of cases of tuberculosis may be benefitted by pneumothorax. It is essential for the physician to know when it is indicated, either for initiation or for continuance when refills are heing given. There are certain dangers in the administration of pneumothorax which must be avoided and which can be avoided by the application and observance of well established practices. Every physician who expects to treat tuberculosis by this means should become familiar with these practices hy thorough study of at least one modern treatise on the suhject, of which there are several excellent ones available.

In considering indications, artificial pneumothorax has been found of value in those early cases which do not respond readily to hedcare, in selected cases with cavities, in many progressive more advanced cases, even though hoth lungs are diseased, and in severe hemoptysis. As Dr. Sharp has pointed out, whenever it fails to accomplish its purpose, it should be abandoned in favor of some other form of lung collapse or for bedcare alone.

Contraindications to be considered are high blood pressure, cardiac decompensation, dyspnea and cyanosis, emphysema, asthma, advanced age, acute pneumonic tuberculosis and extensive disease in the other lung.

Emphasis should be given Dr. Sharp's admonition concerning the necessity for x-ray control hy fluoroscopic examination at every refill and with pictures as may be required to keep a close check on the progress of the disease. In no other way can continuous, even collapse be maintained, nor the interests of the patient be properly served.

A final aim is the functioning lung with arrested disease. Dr. Sharp has stated that pneumothorax is usually kept up from two to three years. I would like to point out that whenever a stage is reached when the air is absorbed very slowly and the introduction of only a small amount raises the pleural pressure to an unusual degree re-expansion should be most seriously considered, because it is an indication that the lung is becoming fixed and that it will expand only with difficulty, and perhaps not at all.

That artificial pneumothorax affords striking relief of pleural pain has been known for many years. Friedman reported the use of artificial pneumothorax in seven cases of pneumonia in 1921, with recovery of all the cases. David reported six patients similarly treated the same year. Both mentioned that the outstanding feature was relief of pain. Klein and Tuck in 1935 report its use in the treatment of lobar pneumonia, and they also emphasized the remarkable relief of pleural pain as a result. Considerable doubt on the value of artificial pneumothorax in pneumonia, however, is expressed by

Francis G. Blake in an article, "A Further Revaluation of Artificial Pneumothorax in Lobar Pneumonia," published Aug. 13, 1938, in the J.A.M.A. in a study of 72 cases thus treated. He concluded that its only proven value is that it relieves pleural pain in some well selected cases.

It has been noticed also by these authors that in these cases artificial pneumothorax has resulted in relief of cyanosis and dyspnea. Various authors have suggested that this may be due to the relief of pain, thereby making breathing easier, or in some way by an improved circulation in the bed of capillaries underlying the visceral pleura.

The work of these individuals has without question shown that pleural pain can often be relieved by artificial pneumothorax. Perhaps it should be employed more often. Here again, however, I think that before anyone undertakes to introduce air into the pleural space, he should by all means qualify himself thoroughly by proper study of the principles of interthoracic pressure, the indications for its use, a very particular knowledge of the technic of administering pneumothorax and of the dangers there may be, and the measures that are required to avoid them.

Dr. Smith's report of his cases corroborates the conclusions of the authors I have mentioned that in skilled hands pain in pleurisy can be strikingly relieved by artificial pneumothorax.

Dr. Champ H. Holmes (Atlanta): Dr. Sharp's most comprehensive paper leaves little to be said. There is one point, a life saving measure, I think should be mentioned: the treatment of air embolism. When it occurs, if you immediately place the patient in an extreme Trendelenburg position, you may wash out the air and save a life.

Dr. Smith was very kind in asking me to discuss his paper. I regret that I cannot more kindly do so. His idea was lucidly conceived, nicely thought out and thought through, and rationalized upon a plausible basis; but not, I think, upon a laudable one. It advocates a procedure fraught with danger. The disproportion between the good that it accomplishes and the hazard that it invites, is too great. We know well that air may he injected into the general venous circulation with impunity; but when injected into the pulmonary circulation, the dread accident of air embolism looms formidable. Several years ago pneumothorax was advocated in the treatment of pneumonia. Its inherent dangers together with its somewhat paradoxical concept, have largely led to its abandonment by most workers in this field. When employed in cases of pleurisy, the danger of piercing the lung is considerably enhanced. I enjoyed with interest the essayist's paper; but to be honest to you and to myself, I cannot and do not endorse it.

Dr. C. M. Sharp (Alto): Dr. Holmes has brought out a very important point which I failed to mention in my discussion and that is the immediate lowering of the head where an air embolus is a result of pneumothorax therapy.

I would also like to point out the dangers in the administration of pneumothorax, even in routine pneumothorax refills. During the past month it was my sad experience to see a patient die on the operating table during a routine pneumothorax refill. One may call it pleural shock or air embolus or mediastinal flutter. The cause of death was never ascertained.

Another danger that I would like to stress is that no patient should ever be given a pneumothorax refill without first locating the degree of collapse present with a fluoroscope. I believe, if we are certain of the location of the lung, there is very little chance for us to have an accident during a pneumothorax refill.

Dr. Linton Smith (Atlanta): A word of caution to those who do, or intend to do, artificial pneumothorax is well worth while, and it is far from my intention to advise anyone who is unskilled in doing this operation to attempt it. I would not advise such person to attempt paracentesis, nor would I suggest that the untrained do a circumcision or other such simple operation. This paper has been addressed to men who are educated and experienced in the art of medicine. I feel sure that none will attempt to do what he is not well qualified to carry to a successful conclusion.

The method of doing an artificial pneumothorax has been described so carefully and in such detail and has been illustrated by a moving picture of the procedure, so I feel that anyone here who would attempt this operation should do it successfully.

The dangers of collapsing a lung have been described so fully and the causes emphasized, I think that they can be avoided. In the large number that I have done there has heen no accident nor death, such as has heen described; but I do not wish to minimize the dangers that exist.

There is no duty incumbent upon the physician greater than the relief of pain; the saving of life and the lessening of morbidity are really secondary to the relief of pain. None of you has ever been looked at and thanked for any service that you have rendered as you have been for the relief of pain, and this paper has been delivered with that idea largely in mind. Pain is the chief symptom of pleurisy and it can be relieved quickly and safely hy separating the two pleural surfaces with air. The pain in pneumonia, which so seriously interferes with sleep and rest, is caused largely by the accompanying pleurisy; and not only is the pain relieved quickly by pneumothorax but the absorption of toxins is lessened and the cure of pneumonia is hastened. The pain and cough of lung abscess have been relieved by this method of treatment and recovery has been hastened.

The specialist should not be allowed to monopolize this valuable means of relieving pain and of saving life when it can so often be used to give relief and save life.

I do not treat pulmonary tuberculosis at all and I do not intend to compete with my friends who specialize in treating this disease, but so often they who are skilled in administering this treatment are not available. With the simple apparatus described by me more physicians can afford great relief from pain and save lives.

SYMPOSIUM ON PEDIATRIC PROBLEMS

NEONATAL ASPHYXIA

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Asphyxia neonatorum is defined as suspended animation in newborn infants from failure of respiration, so let us confine this discussion to those newborn infants who at birth do not institute spontaneous immediate respiration.

Asphyxia of the newborn may be divided into central origin asphyxia and peripheral origin asphyxia. The asphyxia of peripheral origin is the asphyxia resulting from some interference with the entrance of oxygen into the infant's circulation. This may occur before birth from such causes as premature separation of the placenta, interference with the circulation of the umbilical cord (prolapse of cord or looping of cord about neck), or it may occur after birth from strangulation, obstruction of the air passages by foreign material or atelectasis. Most cases of peripheral origin asphyxia result from accidents of labor over which we exercise little control and they form only a small percentage of the total number of cases. By asphyxia of central origin is meant asphyxia resulting from some interference with the respiratory center of the brain. This may occur in gross injury or laceration of the brain, from edema or hemorrhage, from the action of toxins, drugs and anesthetics upon the center or because of the circulatory changes associated with shock.

Yant's experimental work on the extreme sensitivity of brain cells showed that one minute of complete lack of oxygen may be sufficient to cause the death of these cells. Courville showed that extensive areas of "devastation necrosis" have been observed in the brains of infants dying a few days after severe asphyxia at birth. These brain changes are identical with those caused from known anoxic states, such as nitrous oxide anesthesia, acute alcoholic intoxication and hyperpyrexia. Schreiber showed the relationship of asphyxia at birth to serious degenerative changes in the brains of older children. From these three observations we can see how important it is that the newborn breathe spontaneously at birth or, better, it may be said that the newborn continue to breathe regularly at birth, for it has been definitely demonstrated by Schultze, Ahlfeld, Weber, Reifferscheid and Snyder and Rosenfeld that respiration (i.e. rhythmic contractions of the chest) occurs in fetal life. Furthermore, the effects of drugs and anesthetics have been demonstrated on these fetal rhythmic movements in animals.

Surely asphyxia is the commonest emergency in the newborn. Three general considerations determine whether or not a baby will be born asphyxiated. (1) The type of labor. For whatever increases compression and causes sudden release of the fetal head increases cerebral injury and asphyxia. (2) The kind of narcotics or anesthetics used before and during delivery. Excessive sedatives and deep anesthesia increase the likelihood of asphyxia in the newborn. It is well to mention here Irving's work which showed that only 1.9 per cent of living full term infants did not breathe spontaneously immediately after birth when no anesthetic nor narcotic was used during normal delivery. In 100 cases in which pantopon and scopolamine were used, 67 per cent required resuscitation. (3) The kind of infant has much to do with asphyxia at birth. Immature and premature infants have cerebral blood vessels that are easily ruptured and incompletely developed terminal alveoli of the lung which predisposes the infant to atelectasis.

The question of cerebral or intracranial hemorrhage is always brought forth as a cause of neonatal asphyxia. In more recent years, largely due to the work of Clifford, the impression is that many more intracranial hemorrhages occur as a result of intrauterine or neonatal asphyxia than occur because of true cerebral hemorrhage from trauma of the normal or abnormal forces of labor. Clifford, in a pathologic study of eleven cases following intrauterine asphyxia due to placenta previa, showed

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that the changes resulting from anoxemia progress in an orderly fashion through various stages which are: (1) Stage of congestion with intense engorgement of the veins and capillaries, (2) Congestion plus edema, the edema presumably being caused by the transudation of fluid through capillaries, (3) Congestion, edema and petechial hemorrhage being the result either of diapedesis of red cells into the perivascular spaces or of actual rupture of the capillaries. In this stage evidence may be found of actual death of tissue, presumably the result of anoxemia or ischemia. (4) Congestion, edema, petechial hemorrhages and gross bleeding, the latter being the result of continued capillary oozing or of rupture of small veins. This most interesting pathologic study suggests that when advances are made in the prevention and management of neonatal asphyxia, the reward will be a significant drop in fetal and neonatal mortality and morbidity.

There are three theories as to the onset of respiration. The physical theory is that reflex stimulation set up by trauma, resulting from labor, initiates respiration in the newborn. The chemical theory is that the carbon dioxide content in the blood initiates respiration. The biologic theory is that the mechanism of respiration is established in intrauterine life and assumes its vital function at birth. Most of the evidence seems to favor the biologic theory and this is commonly accepted at the present time. Ahlfeld disproved the physical theory when he delivered several women in a warm saline bath and found that respiration began as usual. This refuted the view of skin irritation as the result of exposure to air and change of temperature. The strongest evidence against the chemical theory and for the biologic theory is the fact that regular rhythmic movements of the fetal chest have been demonstrated in pregnant animals.

Eastman has furnished us with original work showing the normal oxygen relationship of maternal and fetal bloods (see slide 1). He collected blood from the umbilical cord (both artery and vein) and blood from the mother before the delivery of the placenta. This blood was obtained as nearly as possible at the moment of delivery. Note in the maternal blood that the arterial oxygen content is almost at capacity while the venous oxygen content is practically 80 per cent. This is in contrast to the fetal blood where the arterial oxygen content is only 50 per cent of capacity and the venous oxygen content is practically 20 per cent. This is important for two reasons: first, it shows why the newborn requires more red blood cells and hemoglobin in order to supply oxygen in quantities approximating the mother. Second, it forms the basis upon which the effect of maternal anesthesia may be shown on the oxygen saturation of fetal blood at birth (see slide 2). We can easily see from this study that so far as the infant is concerned, chloroform anesthesia has no demonstrable effect on the oxygen saturation of fetal blood, but due to its toxic effect on the mother it is not to be recommended as an obstetric anesthetic. Ether produces a slight depression of the oxygen saturation but it is not of sufficient degree to injure the fetus through anoxemia. Nitrous oxide mixtures, administered to mothers in proportion of 80:20 and for periods of less than five minutes, regularly cause moderate degrees of fetal anoxemia but the normal full term infant is apparently not harmed. When nitrous oxide—oxygen is given in concentrations of 90:10 or stronger over periods which exceed five minutes, marked degrees of fetal anoxemia are produced in about one baby out of three and occasionally profound asphyxia neonatorum results.

Cole and his coworkers analyzed 5,000 consecutive deliveries at the Women's Hospital in Detroit with a view of determining the relative importance of the various factors which contribute to the production of asphyxia in the newborn. They concluded that the most important single factor is prematurity. The second most important factor is the trauma of labor, whether it be normal forces of normal labor or the complications of normal labor (dystocia and operative delivery). Sedatives in any amount definitely increase the incidence of asphyxia in the baby in direct proportion to the amounts given. General anesthesia

in any amount definitely increases the incidence of asphyxia in the baby in direct proportion to the duration of the anesthesia. So far as the infant is concerned, spinal anesthesia is far superior to ether anesthesia in elective cesarean sections done at term.

Just a few remarks about the treatment of the average case of delayed breathing. Extreme gentleness and keeping the newborn warm are of great importance. The air passages should be cleared by means of a bulb syringe or rubber catheter. Drainage should be established by posture but suspension by the feet should be avoided if cerebral hemorrhage is suspected. Avoid severe external stimuli (hot and cold baths). Forward traction of the tongue is sometimes of benefit. Have available and give carbon dioxide and oxygen or oxygen if necessary. Limit asphyxia to as short a time as possible. More drastic methods are mouth-to-mouth breathing which is as old as the Bible. Elisha, in his miracle, revived an apparently dead boy by breathing into his mouth ("And he went up and lay upon the child, and put his mouth upon his mouth, and his eyes upon his eyes, and his hands upon his hands; and he stretched himself upon the child and the flesh of the child waxed warm"). We know now that this was done by stimulating the child's respiratory center with about 5 per cent carbon dioxide present in Elisha's own breath. Also by inflating the boy's lung, he brought into action the powerful Herring-Breuer reflex, so important in respiration. (Herring-Breuer reflex: Only through the vagi that a continuous stream of impulses pass to the respiratory center under normal circumstances, so every respiratory movement is modified by these impulses. The vagi contain two different kinds of afferent fibers, or at any rate, fibers with two functions. Stimulation of the first kind stops inspiration and produces expiration. Stimulation of the other stops expiration and produces inspiration. The first kind are stimulated when the lungs are collapsed. The action of this reflex is much more marked when, by a tube introduced into the trachea, the lungs are rhythmically inflated and collapsed. The inflation produces an instantaneous and complete relaxation of the diaphragm; collapse of the lung, on the contrary, produces a tonic contraction of the diaphragm).

The Drinker respirator is mentioned only to be condemned. More frequent use of the intratracheal catheter is urged. Drugs are often disappointing but coramine and lobeline hydrochloride may be used. Lobeline is believed to be of help especially to overcome respiratory depression due to morphine.

In conclusion, we of the medical profession, have a duty and a challenge. A duty to use most cautionsly those analgesics and anesthetics during labor, and a duty to the unborn infant to give it every opportunity to come into this world as strong as possible with the least handicap. We have a challenge from the current newspapers and magazines who write about painless childbirth and this challenge can only be answered by a frank discussion with the pregnant mother who often asks the attending doctor to let her have a painless childbirth. This, of course, has been instilled into her mind by articles such as appeared in the *Reader's Digest*. Obstetric analgesics and anesthetics are a blessing when used by trained men, but too much caution cannot be exercised in their use.

THE TREATMENT OF PNEUMONIA IN INFANTS AND CHILDREN

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In recent years the treatment of pneumonia has undergone radical changes. This is due to the introduction of therapeutic agents of hitherto undreamed of efficiency. With the introduction of serotherapy in 1937 the first great step in overcoming the high mortality of pneumonia was made to be followed shortly by a greater advance due to chemotherapy. Since its introduction in 1939 chemotherapy has made rapid strides. Today a number of sulfonamide compounds are available which have proved antibacterial powers against a number of

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the organisms causing pneumonia. These agents have been used in the treatment of pneumonia in patients of every age, and the results have been uniformly good. Of course, all patients have not responded to the treatment, but the number who have is large enough to warrant their continued use, and today this is the accepted treatment for pneumonia.

Still we must remember that before the advent of these agents the mortality of localized pneumonia due to the pneumococcus in well nourished children was low. Many of these children responded well to symptomatic treatment and the use of oxygen when indicated. In the disseminated or broncho type it was a different story. Also, in the pneumonia due to streptococcus, staphylococcus and influenza bacillus the mortality was very high. It is in these pneumonias in children that chemotherapy has been of particular value. It is true that the results here have not been all that was expected, but no one will deny that it has reduced the mortality far below its previous level.[1]

Chemotherapy

The best results are obtained when the drugs are given early and in adequate amounts. When possible the sputum should be obtained for culture and typing of the organism. It is advisable to make a complete study of the blood including a culture before starting the sulfonamide compounds. Bacteremia increases the mortality[2] and necessitates more vigorous treatment with larger amounts of the drugs or a combination of drugs and serum.[3,4] Daily blood and urine examinations should be made on all patients taking the sulfonamide preparations. These patients should also take large amounts of fluids as toxic reactions will be less.

Sulfapyridine is beneficial in most types of pneumococcus pneumonia, the broncho as well as the lobar, if given in sufficient amounts over a long enough time. Occasionally one finds a patient who does not respond, but this is the exception rather than the rule in the localized type of pneumonia. It is also of value in some of the staphylococcic and streptococcic pneumonias, but there are other preparations which are more effective.

The effective dose of sulfapyridine is 1½ grains per pound of body weight per day for the first 24 or 48 hours. Half of this may be given as the initial dose and then one-third of the initial dose every four hours. This amount should be continued until the temperature is normal or toxic symptoms occur. After the temperature has returned to normal the dose may be cut in half for the next 24 hours and then discontinued. When there is vomiting and the drug cannot be taken by mouth the sodium salt in a 5 per cent solution in sterile distilled water may be given intravenously or subcutaneously. It is seldom necessary to use the drug longer than three or four days in uncomplicated cases. Blood concentrations of 4 to 6 mg. per cent of the free drug are effective and higher ones are usually not necessary, and may prove toxic. Concentrations greater than 20 mg. per cent are contraindicated as they are likely to be definitely harmful. When concentrations exceeded 10 or 12 mg. per cent most of our patients became nauseated and began to vomit. A number complained of headache, vertigo, general malaise and other toxic symptoms, but only a small number showed hemolytic anemia or agranulocytosis.

The temperature usually returns to approximately normal in 12 to 36 hours in the majority of cases, and the patient appears to be improved. At the end of 48 hours he is greatly improved, but the physical signs are not likely to have changed very much. If satisfactory results have not been obtained by 72 hours the blood concentration has probably not been high enough to be effective, or one is dealing with an organism that will not be affected by the drug. In this case it is better to try another preparation or serum along with the drug if the blood concentration has been adequate.

Sulfathiazole, the thiazole analogue of sulfapyridine, is the equal of sulfapyridine in the treatment of pneumococcic pneumonia, and superior to it when staphylococcus is the causative organism.[5] It also has other advantages that make it prefer-

able to sulfapyridine. It is absorbed more uniformly, and there is less conjugation after absorption. Nausea and vomiting are less and it is also less toxic. It is rapidly and uniformly absorbed and rapidly excreted, and therefore should be administered at frequent intervals so as to maintain an adequate concentration in the blood at all times. It is poorly soluble and must be administered by the oral route. The sodium salt may be given intravenously or subcutaneously in a 5 per cent solution in sterile distilled water if the child is unable to retain it by mouth. The dose is essentially the same as that of sulfapyridine, but since it is less toxic it can be given in larger amounts without producing toxic symptoms. Blood concentrations of 4 to 6 gm. per cent of the free drug are adequate. However, concentrations of 10 mg. per cent may be maintained over a period of days without toxic manifestations. Half of the estimated amount for 24 hours may be given as the initial dose and then one-sixth of the estimated 24-hour dose every four hours.

In pneumonias due to the staphylococcus this is the drug of choice. In these cases it is advisable to maintain blood concentrations of 4 to 6 mg. per cent or higher for longer periods of time than in the case of pneumococcic pneumonias. This is especially true where there is a bacteremia. In these patients it may be necessary to continue the drug for weeks.

The temperature of patients treated with sulfathiazole is a little slower in returning to normal than in cases treated with sulfapyridine.[6] Fourteen per cent of our patients treated with sulfathiazole had a normal temperature after 12 hours as compared to 32 per cent in those treated with sulfapyridine. After 24 hours 29 per cent of the sulfathiazole treated patients had a normal temperature and 68 per cent of the sulfapyridine patients. At the end of 72 hours all of the sulfathiazole patients had normal temperatures, while only 94 per cent of the sulfapyridine treated had normal temperatures. It would appear that the response is more prompt with sulfapyridine[6], but the end results in our cases treated with sulfathiazole have been better; toxic symptoms have been less and the mortality has also been less.

Sulfanilamide has proved superior to all other drugs in pneumonia caused by the hemolytic streptococcus. In these cases it is a life saver. This type of pneumonia is a dangerous disease. It usually attacks an infant or child who is in a run down condition, or one recovering from some acute illness, usually one of the communicable diseases such as measles or scarlet fever. In these cases a correct bacteriologic diagnosis is very important. The organism may be cultured in almost a pure culture from the nasopharynx. In many cases the throat is typical, being fiery red in color. There is a tendency for early pleural effusion in these pneumonias, and the organism may be obtained from the pleural exudate which is usually a thin serous or serofibrinous one. Sulfanilamide should be given as soon as the diagnosis is made. If in doubt give the sulfanilamide until the diagnosis is proved otherwise. It should be given in amounts sufficient to maintain a concentration in the blood of 12 to 15 mg. per cent at all times. This can usually be obtained by giving 1 to 2 grains per pound of body weight per day. Half of this may be given as the initial dose and then one-sixth of the calculated daily dose every four hours. It may be necessary to aspirate the chest and remove some of the exudate to relieve pressure symptoms in these pneumonias. If there is no respiratory distress aspiration is unnecessary unless empyema develops. Cyanosis is a common occurrence in patients receiving adequate amounts of the drug. It does not necessitate withdrawing it, but it may be wise to decrease the amount if other toxic symptoms such as psychic disturbances and acidosis appear. In cases of nephritis, hepatitis and severe hemotologic disturbances it will have to be discontinued immediately. Thirty-five per cent of our patients showed cyanosis and 5 per cent showed a severe hemolytic anemia.

Serotherapy

The use of serum in the treatment of pneumonia in the infant and child today is confined largely to those cases that fail to respond to chemotherapy. This is due

to the fact that typing is necessary before it can be used as it is a type specific serum. Typing at this age also is not always accurate and in many instances facilities for typing are not available. Frequently the specific type serum is not available or the organism happens to be a type for which there is no specific serum. Intravenous injections of serum outside of a hospital are difficult and in some cases almost impossible. Anaphylactic reactions may and serum sickness most likely will occur, and serum treatment is expensive. All of these factors have helped to popularize chemotherapy. However, in those patients critically ill and who have failed to respond to the sulfonamide drugs, the specific serum is frequently a life saver.

Serum may be given alone or in conjunction with the drugs. The rabbit antiserum is preferable to the horse antiserum since it is less toxic and can be given in larger and fewer doses. It has greater potency and also is less likely to cause serum sickness. When it is given with the sulfonamide compounds more reactions may occur.[4] If it is given alone it should be administered as soon as the diagnosis is made and the type of the organism determined, as the results are much better when it is administered early in sufficient amounts. It may be administered intravenously as late as the fifth or sixth day with excellent results.[8] If the serum is to be used with chemotherapy the sulfonamide compound may be given as soon as the diagnosis is made, and when the type of organism is determined the calculated amount of serum may be given in a single dose. Smaller amounts of serum may be used with this method. If the patient is very sick it is better to give the full amount of the serum. It should be remembered that small children sometimes react badly to serum given intravenously. In these young patients it is better to give the serum intramuscularly unless the need is very urgent[9,10], and even then some physicians still prefer the intramuscular route and claim excellent results.[10]

All patients receiving serum should first be tested for sensitivity to it by an intradermal injection of the serum diluted 1:100 with normal saline regardless of whether it is rabbit or horse serum. It is also safer to give a second intradermal injection of serum diluted 1:10 before giving the full dose. If there is no reaction it is safe to proceed with the serum which should be warm and well diluted and if given intravenously very slowly. The committee on Immunization and Therapeutic Procedures of the American Academy of Pediatrics recommends 100,000 to 200,000 units of serum in the treatment of pneumonia. We have seldom found it necessary to use such large amounts of the serum. The average amount of serum used in our cases was 50,000 units. Nevertheless, one has to be guided by the condition of the patient. Serum certainly diminishes bacteremia and reduces the mortality when given early and in sufficient amounts. It definitely has a place in the treatment of pneumonia in infancy and childhood and should be used where indicated.

Symptomatic Treatment

All patients with pneumonia should be isolated. While serotherapy and chemotherapy have greatly reduced the toxicity and mortality of pneumonia, the comfort and well-being of the patient may be increased during the most critical periods by intelligent symptomatic treatment. This is particularly true in the use of oxygen and those measures that afford rest and relief from pain and cough. When cyanosis, dyspnea or evidence of anoxemia is present, oxygen is indicated and usually affords prompt relief from these symptoms. The oxygen tent with devices for cooling the oxygen and removing the carbon dioxide is preferable to other methods. The pain and cough frequently seen at the onset may be relieved by the judicious use of codein. In some cases of severe bronchopneumonia moist warm air does more to relieve the cough than all of the drugs usually used. Restlessness due to hyperpyrexia may be relieved by a sponge bath or an alcohol rub. Adequate fluids should be given, but this should in no way interfere with the patient's rest. It is advisable to give all medication and fluids at the same time, and leave as long an interval between as

is consistent with satisfactory progress. If anemia is present blood transfusions may be necessary, but seldom are they indicated in the acute cases with the exception of those caused by hemolytic streptococci and staphylococci. Abdominal distention is best relieved by warm enemas or the rectal tube. At the time of the crisis some patients go into shock. Here the application of warmth and stimulants is indicated. As soon as the child's appetite returns he may be given a light diet of solid food with a gradual return to his regular diet according to his age.

Summary

1. The present-day treatment of pneumonia in the infant and child may be said to consist of isolation and the early use of the sulfonamide compounds, the exact preparation being determined by the type of organism.

2. Type specific serum in conjunction with the drugs in critically ill patients or those who fail to respond to chemotherapy.

3. Transfusions in the streptococcic and staphylococcic pneumonias.

4. Oxygen and symptomatic measures to increase the comfort of the patient and afford much needed rest.

BIBLIOGRAPHY

1. Pub. Health Rep. 2180 (Nov. 22) 55, 1940.
2. Bullowa, J. G. M., and Wilcox, C.: Arch. Int. Med. 55:558-573 (April) 1935.
3. Cecil, R. L.; Lawrence, E. A., and Tolsti, E.: New York State J. Med. 40:488 (April) 1940.
4. Andreson, T., and Cairns, J. G.: Lancet, 2:449-451 (Oct. 12) 1940.
5. McKee, C. M.; Rake, G.; Greep, R. O., and Van Dyke, H. B.: Proc. Soc. Exper. Biol. & Med. 43:561, 1940.
6. Scott, J. P., and Jones, A. M.: J. Pediat. 17:423-434 (Oct.) 1940.
7. Long, P. H., and Bliss, E. A.: The Clinical and Experimental Use of Sulfanilamide, Sulfapyridine and Allied Compounds, New York, The Macmillan Company, 1939.
8. The Treatment of Pneumonia, Brennemann's Pediatrics.
9. Bullowa, J. G. M.: J. Michigan M. Soc. 38:563-579 (July) 1939.
10. Krahulik, L.; Rudmanski, V., and Cunningham, G.: Proc. Soc. Exper. Biol. & Med. 40:18-21 (Jan.) 1939.

The Japanese death rate is 17.4 per 1,000 as compared to 10 or 11 in the United States. Japan's present death rate, in fact, resembles ours of 1900. Individual causes of death in Japan are about as prevalent now as in this country about 1900. For example, the United States tuberculosis death rate now is 45 per 100.000. In Japan in 1937 the rate was 204, closely resembling our tuberculosis death rate in 1900 of 196. The picture is similar for diarrhea and enteritis. America has more than twice as many men to draw on in the military age group as Japan—25 million men from 20 to 35, as against Japan's 11 million in this age group.—Science News-Letter. Jan. 17, 1942.

CHEMOTHERAPY IN THE TREATMENT OF INFECTIOUS DIARRHEA IN CHILDREN

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Diseases of the gastro-intestinal tract in infancy and childhood no longer hold first place among the causes of death in this age group. Nowhere can one find more dramatic evidence of the value of preventive pediatrics than that offered by a study of the mortality figures for these diseases during the past sixty years. A striking graphic picture of the downward trend of this mortality rate is shown in Chart I, which presents the situation for New York City since 1865 as reproduced in Holt and McIntosh. Equally gratifying are the figures presenting the mortality rates for the State of Georgia since 1850, which are shown in Chart II. One is impressed particularly with the sudden drop in mortality which took place at the turn of the century and which coincided strikingly with the great advances made in infant feeding, notably the appreciation of the tremendous importance of clean milk as a vital factor in the health of the infant.

In spite of this great reduction in infant mortality due to gastro-intestinal diseases, the problem remains one of foremost importance to those who have under their care infants and small children. This group of diseases still accounts for about eleven per cent of the deaths in infancy.

As one studies the problem he is impressed by the relative inadequacy of treatment as compared to prophylaxis for the disease. This is especially significant when one considers the infections of the gastro-intestinal tract, notably bacillary dysentery. Although we have traveled far from the calomel and castor oil era, still until the advent of the sulfanilamide group of drugs, our efforts at specific therapy had been at best feeble. Antidysentery serums had

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proved distinctly disappointing.

It was quite natural when sulfanilamide and its derivatives were added to the physician's armamentarium that these drugs should be tried in the treatment of dysentery. Although some success was reported in certain quarters for sulfanilamide and sulfapyridine, the results on the whole were disappointing. In the early spring of 1940 we began the use of sulfathiazole in the treatment of this disease. The success in our first case was dramatic. I should like to give a brief resume of this child's history and the course of her sickness.

Mary Ellen was twenty months old when she suddenly was taken ill on March 3, 1940, with vomiting, fever, and diarrhea. Her condition grew steadily worse; blood appeared in the stools after 48 hours. She was admitted to Egleston Hospital on the fourth day of her illness with the story that on the previous day she had had forty bowel movements. The family history and past history were irrelevant except that the child had drunk raw cow's milk since she was weaned at 13 months. The physical examination revealed an acutely ill child, moderately dehydrated, definitely acidotic, with no evidence of infection save the gastro-intestinal tract. The stool culture obtained on the day of admission was positive for the *B. Dysentericus*, Flexner Type. For the first three days Mary Ellen received continuous intravenous therapy with rice water and dextrose by mouth. Little change could be noted in her condition except for improvement in hydration. At 8:00 A.M. on the third day of her stay in the hospital sulfathiazole was begun. Within twelve hours there was a striking change in the entire picture. Chart III reveals graphically the course of the disease before and after the administration of the drug. As will be seen, the temperature dropped by crisis. Stools improved in character and within 72 hours were reduced to five daily. The child proceeded rapidly to recovery.

With this very gratifying experience it was decided to use the drug routinely during the coming summer in order to determine its true value.

Before reporting these results it will be well to discuss briefly the classification of diarrhea in infancy and childhood as adopted for practical use at the Henrietta Egleston Hospital for Children, Atlanta. After years of discussion among members of the staff, it was agreed that any attempt at the various cumbersome classifications designed to differentiate diarrheas from the standpoint of etiology and pathology were worthless as far as therapy was concerned. We were primarily interested in whether the diarrhea was infectious in origin or non-infectious in origin, and established certain criteria which have made the diagnosis fairly clearcut and simple. And yet, as will be brought out later, our experience with sulfathiazole has made us question the diagnosis of many of our so-called non-infectious diarrheas.

It is obvious that one cannot depend upon bacteriologic studies alone for a diagnosis of infectious diarrhea. It has been necessary to adopt certain clinical criteria. For example, children suffering with diarrhea which is accompanied by blood, pus and mucus in the stool, and who have fever, undoubtedly should be placed in the group of infectious diarrheas although the bacteriologic studies fail to reveal the etiologic organism. Further, we feel that we should place in the infectious category certain infants who are suffering with diarrhea and persistent fever and are quite toxic, although their stools do not show gross blood or pus but do contain much mucus. The so-called parenteral diarrheas of small infants have been placed in the non-infectious group, not because we are at all certain that these diarrheas are not really infectious in origin, but because their clinical course appears to be quite different from the typical infectious diarrheas, and certainly their etiology is obscure.

It is probably superfluous to add that in our group of infectious diarrheas the offending organism is determined whenever possible and the case classified accordingly as a sub-group of the larger class of infectious diarrheas.

In choosing sulfathiazole in the treatment of infectious diarrhea there are certain experimental data which have been presented regarding the absorption and excretion of this and other of the sulfonamide drugs which appear to have definite bearing on its action.

Chart IV presents some studies made by Barlow of the Winthrop Company, which show the excretion of the three drugs in dogs during a 72-hour period. It is significent to note that 27.8 per cent of sulfathiazole was recovered in the feces of these animals, whereas less than one per cent of sulfanilamide and only 18.9 per

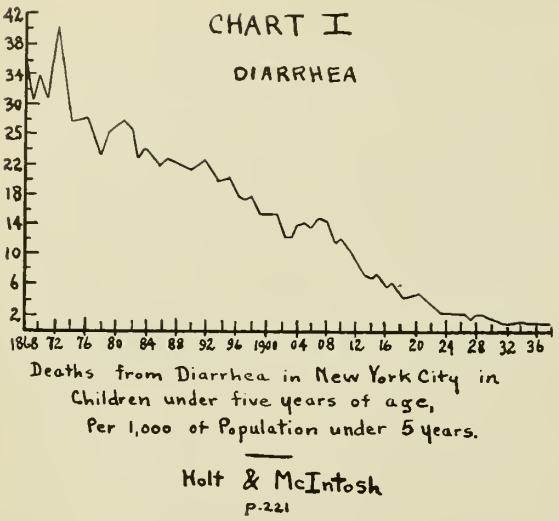


CHART II

DEATHS AND DEATH RATES PER 100,000 POPULATION FROM DYSENTERY, DIARRHEA AND ENTERITIS (ALL AGES) IN GEORGIA: 1850-1940

Year	Number	Rate
1850	654	72.2
1860	1,061	100.4
1870	1,414	119.4
1880	2,011	130.4
1890	2,353	128.1
1900	2,235	101.1
1910	*	*
1920	1,725	59.6
1930	1,347	46.2
1940	693	22.2

* Figures not available.

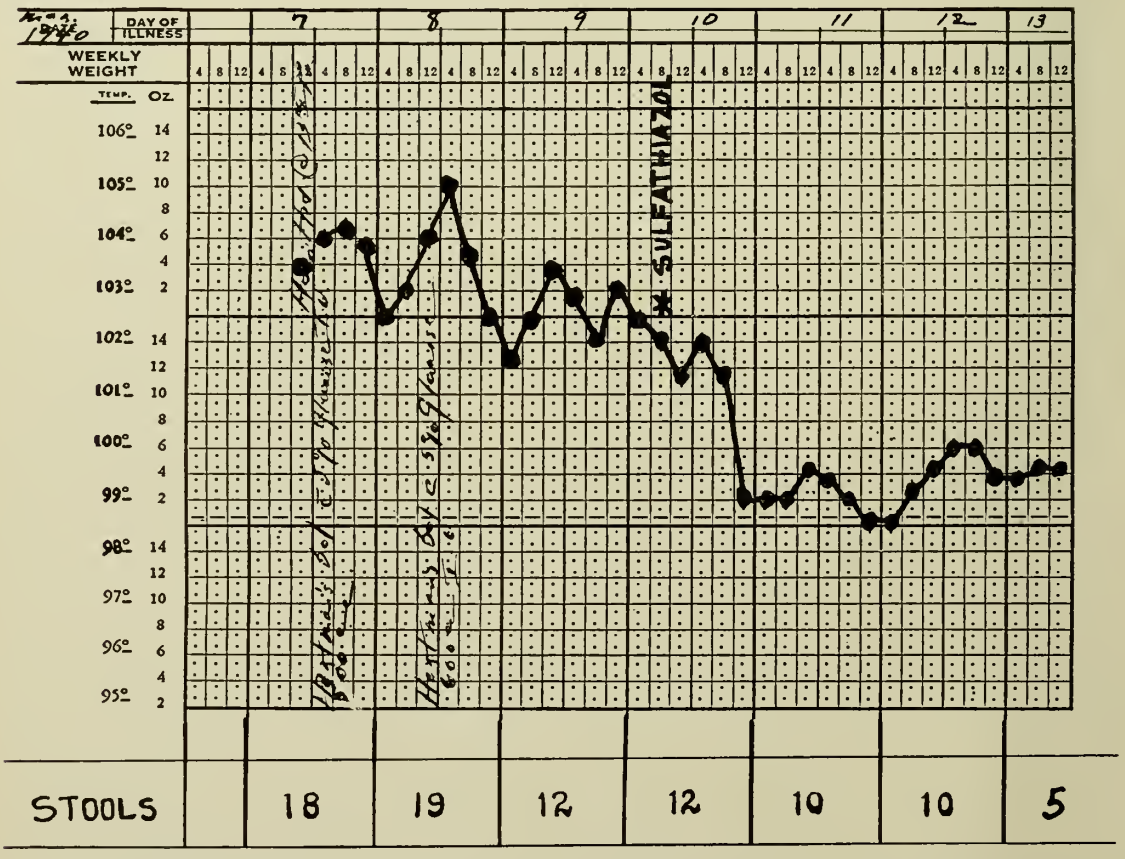
FORM NO. 2

CHART III

THE HENRIETTA EGLESTON HOSPITAL
FOR CHILDREN

MARY ELLEN F.

AGE - 2



cent of sulfapyridine were excreted in this manner. It seems logical to conclude that this fact alone may, in large measure, account for the efficacy of sulfathiazole in infection of the gastro-intestinal tract.

Some further studies of Barlow[1] on the absorption and excretion of sulfathiazole in man are shown in Chart V. He found that the blood concentration reached its height in two to four hours after the ad-

Chart IV
TOTAL EXCRETION—(DOGS)—BARLOW
(Per Cent of Total Dose Recovered in 72 Hours)

Compound	Urine	Feces	Urine & Feces
Sulfanilamide	87.8	0.25	88.05
Sulfapyridine	57.0	18.9	75.93
Sulfathiazole	56.8	27.8	88.5

to show that with this new derivative of the sulfonamide group they were able to achieve a high concentration of the drug in the intestine and a low concentration in the blood and tissues. In view of this property of the drug they then studied a series of cases of bacillary dysentery in

Chart V
ABSORPTION AND EXCRETION OF SULFATHIAZOLE (MAN)—BARLOW
Single Dose of 4 Gm. by Mouth

	Time After Medication in Hours						
	2	4	7	24	48	72	96
Blood mgm. per cent	4.0	4.9	3.7	0.5	0		
Urine mgm. recovered	183	770	490	980	410	75	13
Feces mgm. recovered				520	440		
Urine and Feces							
Total mgm.				2943	3793	3869	3881
Total per cent	4.52	23.8	38.5	73.6	94.8	96.7	97.0

Chart VI
STUDY OF INFECTIOUS DIARRHEA IN 29 CHILDREN IN ATLANTA DURING 1940

			Average No. Days After Therapy	
		Number	Fever Persisted	Diarr. Persisted
Bacillary Dysentery (16 Cases)	Chemotherapy	12	1.1	1.8
	No Chemotherapy	4	6	10
Infectious Diarrhea (13 Cases)	Chemotherapy	12	1.5	1.5
	No Chemotherapy	1	8	5
Total (29 Cases)	Chemotherapy	24	1.3	1.6
	No Chemotherapy	5	6.4	9

Chart VII
STUDY OF INFECTIOUS DIARRHEA IN 29 CHILDREN IN ATLANTA DURING 1940

		Number	Hospital Stay	Mortality
Bacillary Dysentary (16 Cases)	Chemotherapy	12	6.7	0
	No Chemotherapy	4	12.5	0
Infectious Diarrhea (13 Cases)	Chemotherapy	12	5.8	0
	No Chemotherapy	1	13	0
Total (29 Cases)	Chemotherapy	24	6.2	0
	No Chemotherapy	5	12.6	0

ministration of a single large dose of the drug. The chart also shows the excretion of the drug in urine and stool.

Although this paper is not concerned with the use of sulfanilylguanidine in the treatment of infectious diarrhea, it is appropriate at this time to mention the work of Marshall, Bratton, et al[2] who were able children treated with sulfanilylguanidine. Their results as reported in January of this year[3] were most gratifying. Whether this drug is superior to sulfathiazole in the treatment of infectious diarrhea I cannot answer from personal experience. Our results have been so uniformly gratifying with sulfathiazole that we have not felt

CHART VIII

COMPARATIVE STUDIES OF DIARRHEA IN CHILDREN AT THE HENRIETTA EGLESTON HOSPITAL FOR CHILDREN SHOWING EFFECT OF CHEMOTHERAPY

INFECTIOUS DIARRHEA (INCLUDING BACILLARY DYSENTARY)

	Number	Average No. Days Diarrhea	Average No. Days Blood in Stools	Hospital Stay	Deaths
1930-1939					
No Chemotherapy	113	14	8	21	39
1940					
Sulfathiazole	16	2.2	1.5	5.75	0

NON-INFECTIOUS DIARRHEA

	Number	Same as Above	Same	Hospital Stay	Deaths
1930-1939					
No Chemotherapy	111	10	0	17.5	15
1940					
Sulfathiazole	16	2	0	6	0

CHART IX

COMPARATIVE STUDIES OF DIARRHEA IN CHILDREN AT HENRIETTA EGLESTON HOSPITAL FOR CHILDREN FOR AN ELEVEN YEAR PERIOD

				MORTALITY			
Year	Number	Infect.	Non-Inf.	Infect.	Non-Inf.	Total	Percentage
1930	15	8	7	1	2	3	20%
1931	13	7	6	4	1	5	38.4%
1932	14	8	6	1		1	7.1%
1933	16	8	8	3	1	4	25%
1934	13	4	9	1	5	6	46.1%
1935	14	6	8	2		2	14.2%
1936	31	20	11	4	1	5	16.1%
1937	25	13	12	5		5	20%
1938	35	16	19	13	5	18	51.4%
1939	48	23	25	5		5	10.4%
1940	46	19	27	0	0	0	
Total	270	132	138	39	15	44	20%

CHART X

SULFATHIAZOLE IN TREATMENT OF BACILLARY DYSENTERY
SUMMARY OF EIGHT CASES (H. E. H.)

		Duration Disease Before		DURATION IN DAYS AFTER RX		SULFATHIAZOLE Grains per lb.	Number Days	Blood Concen-
No.	Age	RX	Stool Culture	Loose Stools	Fever	24 Hrs.	Given	tration
8788	1 Yr.	5 Wks.	Shiga	2	1	1⅓ gr.	7	4.7
8765	10 Mos.	8 Days	Hiss Y	3	1	1½ gr.		
8428	2½ Yrs.	4 Days	Flexner	1	1	1	4	
8135	15 Mos.	4 Days	Hiss Y	3	1	1½	4½	4.7
7391	3 Yrs.	2 Days	Flexner	2	1	1½	3	
8849	13 Mos.	2 Wks.	Shiga	2	1	1½	3	2.8
9044	17 Mos.	4 Days	Hiss Y	3	1	1½	7	2.8
9175	2 Yrs.	6 Days	Flexner	4	1	1½	5	4.7

justified by the reports of the Hopkins group or by the report of Dr. George Lyon of West Virginia[4] to change to the newer preparation.

The cases reported in this study were white children suffering with infectious diarrhea during 1940. They lived in or near Atlanta. The majority of them were treated at the Henrietta Egleston Hospital for Children. Eight of them were treated on the wards of Grady Hospital.

Sulfathiazole was administered, as a

rule, on the day of admission. The dosage varied between one and one and a half grains per pound for each 24-hour period. The drug was usually continued for three or four days after temperature had dropped to normal and stools were approaching normal. Blood concentrations on the whole were low, varying between two and five milligrams per 100 cc.

Chart VI summarizes the data obtained from the charts of 29 children suffering with infectious diarrhea during 1940 in the Atlanta area. Sixteen were proven cases of bacillary dysentery, twelve of whom received sulfathiazole; four received no chemotherapy. In the untreated patients the fever and diarrhea persisted about five times as long as in the treated group. There were thirteen children in whom a diagnosis of infectious diarrhea was made although it was not possible to demonstrate the presence of a specific organism. The same striking difference in the persistence of fever and diarrhea in the treated and untreated cases can be noted.

Chart VII shows the same group and compares the hospital stay of the treated with the untreated children. It will be noted that the latter remained in the hospital approximately twice as long as the former. There were no deaths in either group.

The results in these cases were so entirely gratifying that we did not feel justified in withholding sulfathiazole from any of those children definitely diagnosed infectious diarrhea. Hence, the number of controls for 1940 is extremely small and hardly lend themselves to comparison.

In the hope of obviating this criticism all patients with infectious diarrhea treated at Henrietta Egleston Hospital for the eleven year period, 1930-1939, during which time no chemotherapy was available, are compared with the sixteen patients treated with sulfathiazole in 1940. Chart VIII presents this data. The comparison is striking: One third of the patients in the 1930-39 group died, whereas no child was lost in 1940. The duration and severity of the disease were greatly reduced.

This chart brings out also another interesting observation. Sixteen of our so-called non-infectious diarrheas were treated with the drug and to our surprise results were again most gratifying. These children were supposedly suffering with a diarrhea resulting from indigestion rather than one due to an infection. Favorable results in this group suggest the possibility that many of our so-called non-infectious diarrheas may, after all, be infectious in origin.

Chart IX gives in more detail the cases of diarrhea treated at the Henrietta Egleston Hospital for each year since 1930, and shows the comparison with the 1940 cases. The yearly variation in mortality rate is striking, the lowest rate (except for 1940) occurring in 1932 when only 7.1 per cent of the children suffering with this disease died, whereas in 1938 over 50 per cent of the cases died. This undoubtedly indicates a difference in virulence in the organism from year to year. In 1940, when chemotherapy was employed for the first time, no deaths occurred.

Instead of reporting in detail the histories of the cases included in the study, Chart X summarizes eight case reports of bacillary dysentery treated at the Henrietta Egleston Hospital. The duration of the disease before treatment varied from two days to five weeks. Cultures of the stools showed three cases of Flexner infection, three of Hiss Y, and two of Shiga. Loose stools persisted after treatment in one case for one day, in three cases for two days, in three cases for three days and in one case for four days. Temperature came to normal in every case within 24 hours. The dosage, duration of dosage, and blood concentrations are also given.

Similar results in the treatment of dysentery have been reported by Ravenel and Smith[5] before the Pediatric Section of the Southern Medical Association last fall. Recently, a reprint by Valdes from Buenos Aires has been received with reports showing excellent results in the treatment of ten children and two adults.

The report of Marshall and his co-workers in the use of sulfanilylguanidine in dysentery showed equally good results for six of their patients who were treated within

three days of the onset of the disease. Those children, however, who received the drug late in the disease responded less well; in several of the cases the diarrhea persisted for ten or twelve days after the drug was begun, and in one instance for twenty-one days. Thus far in our series we have noted no such relationship between late administration of the drug and the intractability of the disease.

During the course of the study it was interesting to note the change in our method of feeding these infants. At the outset we followed the usual procedure of starvation period with dextrose solution or starch waters and later protein milk or skimmed milk. As the work progressed it became apparent that the children were able to digest a fairly liberal diet quite early. It was not unusual to order soft diet for these children either on the day of admission or the following day without any apparent discomfort or untoward symptoms.

Summary

The trend in mortality rates for the diseases of the gastro-intestinal tract is discussed.

The inadequacy of treatment up to the present time for infectious diarrhea is stressed.

A brief discussion of the absorption and excretion of sulfanilamide, sulfapyridine, sulfathiazole and sulfanilylguanidine is presented.

A report of twenty-four patients with infectious diarrhea treated with sulfathiazole in 1940 is made. These case reports of patients are compared with those not so treated in 1940, and with those patients suffering with the disease during an eleven year period preceding chemotherapy.

The possible value of the drug in our so-called non-infectious diarrheas is suggested.

Conclusions

Sulfathiazole administered orally to patients suffering with bacillary dysentery and infectious diarrhea is an effective remedy.

An adequate dosage lies between one and one and a half grains per pound body weight for each 24-hour period.

It is probable that many of our so-called non-infectious diarrheas are really infectious in origin. They frequently may respond favorably to the administration of the drug.

Grateful acknowledgment is made to members of the house staff of both Henrietta Egleston Hospital and Grady Hospital for their aid in preparing much of the data presented in this paper. Especial thanks are due to Dr. Egbert V. Anderson.

BIBLIOGRAPHY

1. Reprints furnished by Winthrop Chemical Company.
2. Marshall, E. K., Jr.; Bratton, A. Colvin: White, H. J., and Litchfield, L. T.: Bull. Johns Hopkins Hosp. 67:163, 1940.
3. Marshall, E. K., Jr.; Bratton, A. Colvin; Edwards, Lydia B., and Walker, Ethel: Bull. Johns Hopkins Hosp. 68:94, 1941.
4. Lyon, Geo. M.: West Virginia M. J., Vol. 37 (Jan.) 1941.
5. Revenel, Samuel F., and Smith, D. Lesesne, Sr.: South. M. J. 35:504 (May) 1941.

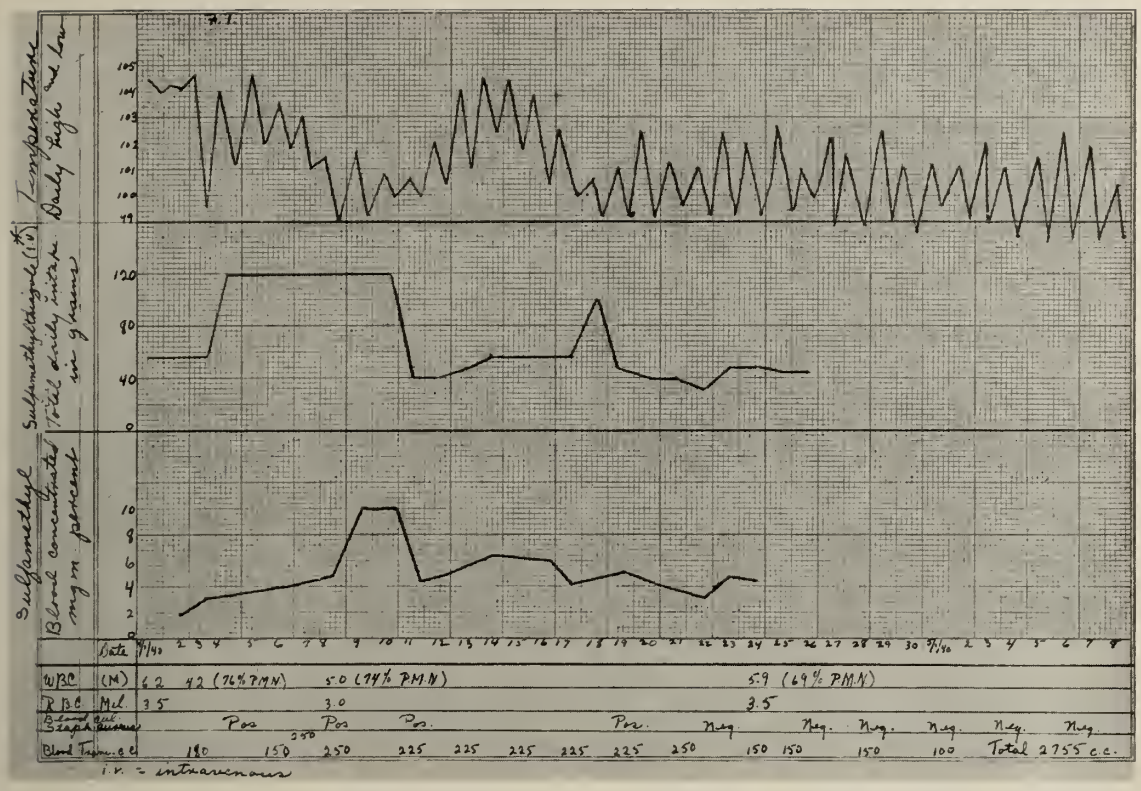
THE TREATMENT OF VARIOUS INFECTIONS IN CHILDREN WITH SULFATHIAZOLE

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Augusta

The practitioner of medicine must ever remain a student. This is no better illustrated than in the rapid progress being made in the field of chemotherapy. The sulfonamide group of drugs, their wide range of usefulness, their dangers, their good and their general acceptance in so short a period of time is evidence of this truth. Sulfanilamide was introduced into American therapeutics only a little over four years ago; sulfapyridine was accepted by the Council on Pharmacy and Chemistry in May, 1939, and sulfathiazole in August, 1940. The volume of accumulated literature concerning the use of these drugs is known to us all. New uses are still being found and older ones further substantiated by greater clinical use. These studies will establish their proper place in medicine. Toward that end some of the results obtained in children in the University Hospital, Augusta, are reported:

Case 1. F. T., a 12 year old white male, was admitted to the hospital April 1, 1940. The family and past histories were unimportant. Ten days prior to admission he developed high fever, malaise and general body aches, followed the next day by pain and swelling in the left arm and leg. At times nausea and delirium were present. Two days prior to admission he had a chill.

Read before the Medical Association of Georgia, Macon, May 15, 1941.



Physical examination revealed a well developed but poorly nourished boy who appeared gravely ill. He was mentally cloudy. The left axillary and right inguinal glands were greatly enlarged, tense and tender. The left shoulder, elbow, hand and ankle were greatly swollen, tense, tender and red but not fluctuant. Motion of both limbs was limited. His heart was moderately enlarged and a soft systolic murmur was heard at the apex. The spleen was enlarged and tender. Blood culture was positive for staphylococcus aureus. The other laboratory data will be shown by lantern slide.

Treatment consisted of glucose, nicotinic acid, and blood and sulfamethylthiazole intravenously. Five days after admission he developed infection of the right parotid gland, which subsided without suppuration after x-ray therapy.

Improvement was slow but progressive. Blood cultures were negative after three weeks. On May 5, five weeks after admission, pain and tenderness developed in the right thigh, pelvis and hip joint. X-ray showed osteomyelitis of the right pubic bone extending into the acetahulum and involving, too, the head of the femur. A spica cast was applied to this extremity, and one week later the boy was discharged from the hospital.

On a return visit, June 2, he appeared improved. The urine showed a trace of alhumin. the white blood cell count was 8,600; the red 3.500,000. Blood culture and blood chemical studies including sugar, N. P. N. and cholesterol were normal.

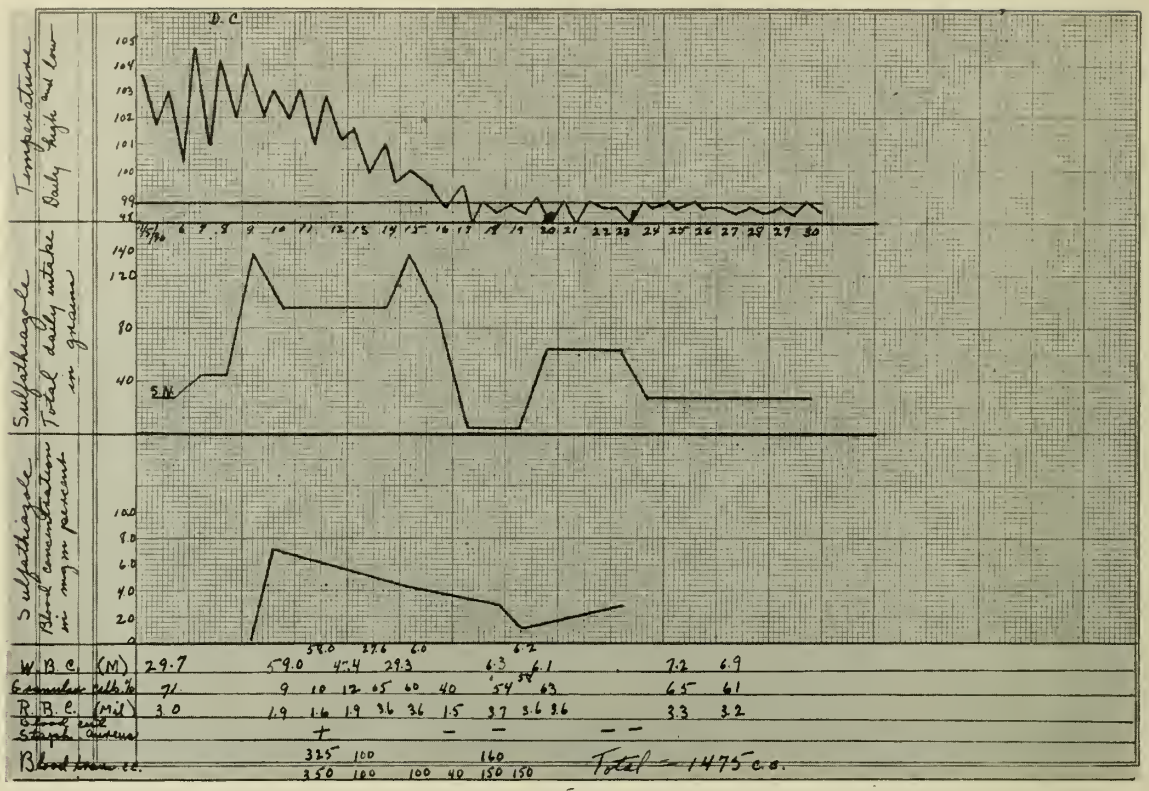
Again on July 5 he returned and showed continued improvement. X-ray studies of the right hip and pelvis showed destruction of the cartilage of the joint and ankylosis of same. The cast was removed.

On November 11 he returned complaining of pain in the left elbow. Some swelling and tenderness were present. X-ray examination showed old osteomyelitis of the humerus and glenoid fossa.

Comment: This boy had rather low blood levels of sulfamethylthiazole even though it was given intravenously in daily amounts of 40 to 120 grains. Loss through the kidney was facilitated hy free fluid intake. Foci of infection developed but did not come to the surface and were never drained. The temperature elevation was evidently maintained by these foci, one of which was not noted until several months after the initial infection. His white blood cell count was low hefore sulfamethylthiazole was started but was not affected by its administration. Sulfamethylthiazole is similar to sulfathiazole in its action in staphylococcus aureus infections. However, due to its producing peripheral neuritis it has not been accepted hy the Council on Pharmacy and Chemistry.

Case 2. D. C., an 8 year old Negro female, was admitted on Nov. 11, 1940. Six days before admission she developed a pimple inside her right nostril. After picking the pimple the upper lip and right side of the face and neck became swollen, hot and painful. This was accompanied by fever hut no chill.

Examination revealed a well developed and well nourished child who was mentally clear but acutely ill. Marked swelling extended from the right eye into the neck. This area was hot and tense. The eye was swollen and closed, and the mouth could be only partially opened. A sero-sanguinous discharge came from the right nostril. The clinical impression was cellulitis. Treatment consisted of hot packs, x-ray, sedatives and



sulfanilamide which was changed to sulfathiazole on the second day in the hospital. The swelling persisted and extended to the scalp. Five days after admission multiple small incisions were made into the swollen area. In the eyelids small abscesses were drained but only brawny induration was found in the face and scalp. At this time the patient was definitely worse and showed respiratory distress. The granular cell count fell to 9 per cent. This, as well as the clinical appearance, improved after blood transfusions without discontinuing the sulfathiazole. The blood culture which was positive for staphylococcus aureus six days after admission became negative. Swelling and nasal discharge became less marked but right sided exophthalmos and dilatation of the veins of the upper lid were evident. X-ray examination showed no infection of the skull bones but did show infection of both ethmoid and sphenoid and the right maxillary sinuses.

Examination of the eye by Dr. R. E. Leonard reads: "The patient has complete optic atrophy of the right eye with complete opthalmoplegia. There is marked proptosis and congestion of all the tissues. The right pupil is fixed and does not react to direct light as opposite pupil. There is a marked diminution of sensation in right first division of the 5th nerve. Diagnosis cavernous sinus thrombosis. . . ."

A spinal tap at the time showed a pressure of 140 millimeters of water, and traumatic blood.

At the time of dismissal the patient was greatly improved but blind in the right eye.

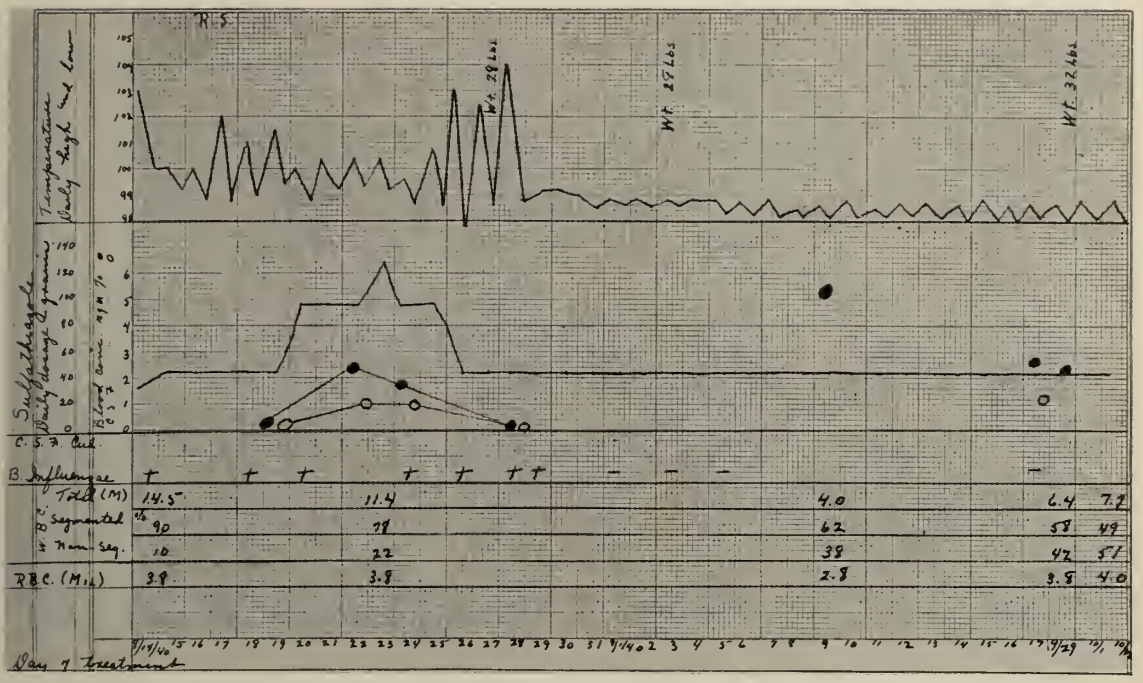
Comment: The condition of this child was serious from the beginning. Response to therapy was not noted until after two weeks had passed. The drop in granular cells and in the red blood cell count could be attributed to sulfathiazole, yet a return to near the original values was obtained for both after blood transfusions without discontinuing the drug. Again, as in Case 1, the blood concentration of sulfathiazole was rather low.

Case 3. R. S., a three year old Negro male was admitted Aug. 14, 1940, one day after becoming ill with fever, loss of appetite and drowsiness, followed by a convulsion.

The child was poorly developed and poorly nourished, was dehydrated and very drowsy. His pupils were irregular and reacted poorly to light. The pharynx and both ear drums were red. Kernig, Babinski and Brudzinski signs were positive. Spinal fluid was under greatly increased pressure, contained 759 cells per cubic millimeter, mostly polymorphonuclears and was positive for protein both with the Pandy and Ross-Jones tests. Smear and culture were positive for B. influenzae.

Therapy consisted of sulfathiazole by mouth, repeated spinal drainage, fluids and food as tolerated and fluids extra-orally when indicated. Attempts to secure blood for transfusion were unsuccessful.

Clinical response was rather slow. The spinal fluid pressure remained high even though the cell count fell. Due to low concentrations of sulfathiazole in both the blood and cerebro-spinal fluid, the dose was increased from 45 to 135 grains per day almost 5 grains per pound per day. On this dosage vomiting developed and persisted for three days during which very little of the drug was retained. Also during this time the spinal fluid pressure rose and turbidity increased. The clinical condition was now worse. After three days the nausea ceased, the spinal fluid showed less pressure and fewer



cells and within two days became negative on culture. The patient now appeared improved and continued so until dismissed on October 12, almost two months after admission. At this time he was clinically well and the cerebro-spinal fluid was essentially normal. Since dismissal he has been seen three times in the out-patient department and each time appeared normal in every way.

Comment: Although sulfathiazole was given in doses of 1½ to 5 grains per pound of body weight per day its blood and spinal fluid concentration was low, especially was it low in the spinal fluid. This bears out the observation that sulfathiazole diffuses poorly into the cerebro-spinal fluid. Vomiting occurred only after the dosage reached 5 grains per pound of body weight per day. During this time the patient grew worse but soon made an apparently complete recovery.

Sulfathiazole is rapidly gaining favor among the sulfonamide drugs. In general it is more effective in staphylococcus infections and is decidedly superior to the others. Furthermore, it is less toxic.

Sulfathiazole possesses certain qualities which should be borne in mind. Its absorption is rapid and much more dependable than sulfapyridine. Its elimination, too, is rapid and high blood levels may be difficult to obtain. This is especially true when treating children, where the liquid intake is proportionally higher than in adults. Conjugation to acetylsulfathiazole is more rapid than sulfanilamide but less so than sulfapyridine. The acetyl forms are inactive against bacteria and may crystallize in the kidneys, producing irritation there. The crystals may form the nuclei of stones. Sulfanilamide and sulfapyridine diffuse readily into the cerebrospinal fluid where sulfathiazole does so poorly.

Sulfathiazole has a wide field of usefulness. Its effect in infections due to the pneumococcus, streptococcus, B. coli and gonococcus appear to be as good as with sulfanilamide or sulfapyridine and it is decidedly superior to them in staphylococcus aureus infections.

Grulee and Mason[1] reported three cases of furunculosis in which cures were obtained with sulfamethylthiazole. One was a patient who had had an estimated 450 individual abscesses drained over a period of eight months, during which time most of the recognized methods of treatment had been used. Obvious improvement was noted within 48 hours after sulfathiazole treatment was begun. During the 22 days of sulfathiazole therapy only five abscesses formed, and none was noted during the last seven days of treatment.

Taylor[2] gives an interesting report of the use of sulfathiazole in both parenteral and bacillary diarrhea in children. Using alternate patients he found "the average time required for the stools to reach four a day of normal color and consistency was

3.2 days in the sulfathiazole treated group and 15.6 days in the control group." There were no deaths in the treated group of thirteen patients but there were two in the control group.

The mortality in influenzal meningitis has been high with all methods of treatment so far reported. Whether the sulfonamide drugs will be effective for this condition is yet to be determined, but some favorable results are beginning to appear in the literature. Jacobsen and Neter[3] reported a cure in one patient treated with specific serum and sulfapyridine. Waring[4] had two cures after using sulfapyridine, and Sakula[5] one treated with sulfanilamide.

Toxicity

Sulfathiazole in most respects is less toxic than the other sulfonamide drugs, but its use should be attended by the same care. Spink and Hansen[6] found the toxicity of sulfathiazole to be 65 per cent of that of sulfapyridine.

Nausea and vomiting are less frequent and less severe than with sulfapyridine. Acidosis does not occur as with sulfanilamide. Soda bicarbonate administration is therefore not indicated with sulfathiazole. Cyanosis due to methemoglobinemia is less frequently seen than after sulfanilamide. Drug fever coming on about the seventh to tenth day occurs in about 3 per cent of patients. Drug rashes are rather common. Injection of the sclera and conjunctiva noted usually from the fifth to the ninth days and resembling "pink-eye," is not uncommon. Burning and lacrimation may be present but recovery is complete. Hemolytic anemia is rare; mild leukopenia and neutropenia may follow but acute agranulocytosis has not been reported as a toxic manifestation of sulfathiazole therapy.[7]

Renal complications due to irritation by crystals of acetylsulfathiazole, while not as common as with sulfapyridine, do occur. Gross hematuria is rare but microscopic blood has been reported in 6 per cent of patients of one series.[8] Stone may form about the crystals. Hepatitis and jaundice have been observed.

Dosage

The dosage of sulfathiazole is determined by the severity of the infection, the size of the patient, his tolerance and the blood concentration attained. While the therapeutic effect does not necessarily parallel the blood concentration the higher levels of free drugs are usually more effective.

In adults the dosage in the less severe infections is 2 to 4 grams at the initial dose and then 1 gram every four hours until the temperature has been normal for 48 hours. In severe infections, such as pneumonia with bacteremia and staphylococcus septicemia, the initial dose is 4 grams and then 1.5 grams every four hours.

Children require proportionately higher doses than adults. In mild infections an initial dose of 0.15 grams per kilogram of body weight or roughly 1 grain per pound is given followed by 0.25 grams per kilogram or about 1¾ grains per pound per day divided into six equal doses. In severe infections 0.2 grams per kilogram or 1½ grains per pound should be the initial dose followed by a daily maintenance dose of the same amount divided into six equal parts. The maintenance dose may have to be increased to attain the desired blood concentration. This level for mild infections is 4 to 6 mg. per cent, and for severe ones 8 to 12 mg. per 100 cc. of blood. Due to the rapidity of absorption and eliminations these levels may be difficult or even impossible to reach or maintain.

BIBLIOGRAPHY

1. Grulee, Clifford, S., and Mason, John T.: J. Pediat. 16:566-569 (May) 1940.
2. Taylor, Grant: J. Pediat. 18:469-472 (April) 1941.
3. Jacobsen, A. W., and Neter, Erwin: Am. J. Dis. Child. 60:363-367 (Aug.) 1940.
4. Waring, J. J.: J. South Carolina M. A. 35:284-284, 1939.
5. Sakula, J.: Pfeiffer B—Meningitis Successfully Treated With M & B 693 Complicated by Granulocytopenia. Lancet, 19401:596-598.
6. Spink, W. W., and Hansen, A. E.: Sulfathiazole Clinical Evaluation, J. A. M. A. 115:840-847, 1940.
7. Long P. H.: Haviland, J. W.; Edwards, L. B., and Bliss, E. A.: J. A. M. A. 115:364-368, 1940.
8. Flippin, H. F., Schwartz, L. and Rose, S. B.: Ann. Int. Med. 13:2038-2049, 1940.

DISCUSSION ON PAPERS OF DRS. C. M. BURPEE, W. A. WILKES, M. HINES ROBERTS, AND R. C. MCGAHEE

Dr. A. M. Johnson (Valdosta): Mr. Chairman and Members of the Medical Association of Georgia: We are probably all using a great deal of the sulfonamide drugs and I suspect sometimes indiscriminately. I am sure none of the men meant for a moment for us to use the various sulfonamides in every condition we see. Some of us will see kidney disturbances with sclerosis and crystals in the urine. We will see a large number

of nervous reactions from sulfapyridine more than sulfathiazole.

In regard to the treatment of pneumonia, of course, these drugs have completely revolutionized our treatment of pneumonia. We should, of course, never consider that the use of serum is indispensable in some cases. There are, however, limitations of facilities in giving serums to consider. We frequently have reactions to consider and the fact that cases are difficult to type, particularly in children it is difficult to obtain adequate amounts of sputum to type. So, we still have to rely on sulfathiazole as the most adequate treatment of pneumonia.

In regard to the treatment of diarrhea with sulfathiazole preparations, we must always remember that we see diarrhea infections in varying severity and varying years. It seems that apple pulp will cure a large majority of our cases and others where the mortality rate runs extremely high. It will be true in the use of sulfathiazole during future years.

I think we should all feel happy that these papers have been presented and for the completeness with which they have been presented.

Dr. Don Cathcart (Atlanta): I am extremely sorry that Dr. Morrison was not here to present his paper on neonatal asphyxia. Taking these papers all in all there have been three very excellent presentations and I wish to thank the gentlemen who have been on the program for their very excellent papers.

The work that has been presented this afternoon has, of course, been very comprehensive and to attempt to discuss three such complete papers, I think, would be a little bit ridiculous, so, with your indulgence, I want to make a few remarks along another line.

The Georgia Pediatric Society has tried, in the past, to gain a place on this our State program and up until the present time we have been unsuccessful. We feel that if we can present to this general assembly papers which will be of interest to the medical men of Georgia as a whole, that we will have a permanent position on this program, so, at a session of the Georgia State Pediatric Society, which met for discussion today noon, a resolution was passed in which we wish to thank the Program Committee of the State Medical Association for giving us four papers on this Thursday afternoon program and it is our wish that we may continue to have this position.

Dr. Frank Schley (Columbus): I have enjoyed this symposium a great deal of course, as all pediatricians have, and I hope that the other members present have, too. I think it is a wonderful adjunct to the State program.

There is one thing I should like to ask Dr. Burpee if he is to have a closing discussion, and that is; is it necessary for the physician to have a careful follow-up of blood count and hemoglobin determination of those to whom he administers this drug? It is not practical to a man doing general practice in the home to follow out this daily routine and in my experience it has been altogether unnecessary when the drug is given from two to five days. I had the pleasure of hearing Dr. Perrin Long at the American Medical Association last summer in New York City and it was his statement that if the drug was given less than twelve days, in the vast majority of cases you don't need to check the blood in any way. His reason, he said, for making the statement was to encourage the general practitioners in small towns and in the country to use this drug more and not feel that because they didn't have a hospital practice they were precluded from using this drug judiciously. I feel, personally, that a daily check up on blood count and hemoglobin is entirely unnecessary when you need to give the drug only a short time.

Dr. Joseph Yampolsky (Atlanta): Chemotherapy is beginning to play a definite part in the treatment of infectious diarrheas. Primarily the treatment of diarrhea consists not only of ridding the patient of loose bowels but also of shortening the disease and prevention of marasmus states which are the primary cause of death in the majority of cases. The use of sulfapyridine is being discarded in favor of sulfathiazole on account of the associated nausea and vomiting in many cases where all the symptoms of gastro-enteritis already are present.

Those of us who had the privilege of watching these patients last summer at the Grady Hospital, Atlanta, noticed the beneficent effects of sulfathiazole in bacillary dysentery. The shortness of the duration of this disease to a minimum, and the ability to feed patients almost at will make us believe that in this drug we have an excellent weapon with which we can combat infectious diarrheas of bacillary type infections. In cases, however, due to other bacterial infections I presume that we will have to switch to other chemicals of the same group.

In conclusion I would like to say that although numerous reports have been published in the literature on the use of sulfathiazole in bacillary dysentery that, as yet, we must not place all of our faith in this drug until it has been tried in sufficient number of cases. I make this statement primarily because I consider that our cases at the Grady Hospital last year were of a mild nature and it will take more than one summer of experience to prove the contention that sulfathiazole and similar drugs are specific in the treatment of infectious diarrheas. We do know, however, that splendid results have been accomplished so far and for that reason we must encourage the use of these drugs in the hope that a solution of this most fatal condition may be found and that our rural districts be rid of this serious menace which faces our children in Georgia during the summer months.

Dr. C. M. Burpee (Atlanta): In the use of the sulfonamide preparations we have a very potent therapeutic agent for the treatment of pneumonia. However, this doesn't warrant relaxation in the care of these patients.

In answer to Dr. Schley's question concerning the necessity for close blood work in pneumonia patients receiving sulfonamide preparations, we have not found it absolutely necessary where the drug is used in reasonable amounts for only a few days. Where these drugs are used in large quantities over an extended period of time it is necessary to follow the blood picture

closely. Even under these conditions only a small percentage of these cases are likely to show agranulocytosis, marked destruction of the red blood cells or other toxic manifestations of the blood. In only about 5 per cent of our cases did we get any evidence of blood destruction. In some cases we used large amounts of the drugs, but we were able to offset the deleterious effects by transfusions.

In all critically ill cases, it is advisable to watch them as closely as possible. I think it is advisable, also in all cases treated with the sulfonamide preparations to have them worked up completely and to have serum available if necessary. Occasionally a patient will require it and here it is a life saver. All critically ill pneumonia patients should not only be typed for antiserum, but also matched for blood transfusions in case they are needed.

Dr. M. Hines Roberts (Atlanta): I think Dr. Yampolsky's points were very well taken in regard to the seasonal variation in the severity of infectious diarrhea. The disease appeared to be mild in the summer of 1940. However, it seems indisputable that the drug has a definite effect upon the course of the disease.

Unfortunately time did not permit a summary of the various excellent papers already presented on the use of sulfathiazole in the treatment of bacillary dysentery. Ravenel of North Carolina has reported a series of patients treated in that state with quite similar results to those which we have experienced at the Egleston Hospital for Children.

Marshall's report on the use of sulfaguanidine in the treatment of infectious diarrhea is interesting and enables us to compare the value of the two drugs. Eight of his fourteen patients failed to show the dramatic response noted in the first six of his series, and in all of the cases reported from Egleston. He attributed this relative ineffectiveness of the drug to the fact that the treatment was not begun until the disease had lasted for several weeks. In our series it appeared that sulfathiazole seemed to give equally excellent results even in those cases in which the infection had existed for as long as four weeks before administration of the drug.

In closing I should like to stress a point mentioned by Dr. Yampolsky. The use of sulfathiazole in infectious diarrhea makes it possible to give a liberal diet to the patients almost immediately after the drug is begun.

Dr. R. C. McGahee (Augusta): I think you can probably appreciate the enthusiasm we have had in the results we have obtained in the two cases of staphylococcus septicemia that we have had. Our experience has been, I am pretty sure, the same as yours, in that the patients suffered terrifically high mortality. We have gotten two by. I think the child with influenza meningitis is the only one who has recovered so far in our hospital from this infection, consequently we are looking forward to watching the results in any patient admitted with staphylococcus septicemia or influenza meningitis.

THE CENTENNIAL OF THE GOLDEN AGE OF ANESTHESIA

The years 1842-1846 may be designated as the period which enveloped within its sphere those epochal events that by mutual consent constitute the basis upon which the birth of anesthesia is predicated. In this relatively short space of time, as though predestined by the divine will of God, were evolved scientific contributions, profound and universal in nature, created in the intellects of those immortal figures, Long, Wells and Morton, men whose names are revered by a grateful posterity. It is but natural and proper today as the world, shaken by the scourge of war, enters the era of the one hundredth anniversary of anesthesia's nativity, that the members of the medical and dental professions should join with their fellow-citizens in paying deserving tribute and worthy homage to the memory of these benefactors of all mankind.

Although the joyous tidings, which in the fifth decade of the past century proclaimed the conquest of surgical pain, emanated from American soil, let it not be forgotten that the setting was in part laid in the Old World. Of the early pioneers historians have placed upon the anesthesia scroll of honor the name of Henry Hill Hickman.[1] Imbued with the true concept of the phenomenon of anesthesia, this English physician endeavored, but in vain, to bring to society the beneficent effects of anesthesia. His tragic failure and the sad chapter of his young and fruitful life can only be attributed to intolerant reactionary colleagues both in his native land and France. Fate, it would appear, had decreed that the western hemisphere should make the memorable contribution. In the rural community of Jefferson, Madison County, in the State of Georgia, occurred on March 30, 1842, the notable event, the centennial of which will be observed this year. In the hands of a country doctor was fashioned the key that was to unlatch the door holding secure the mystery to the abolition of physical suffering, and to banish forever from the operating table the dark shadow of pain. To Crawford W. Long, youthful, studious and humble physician of Georgia's ruddy hills

was given the signal honor of lifting the mantle which from time immemorial had enshrouded humanity in the physical and mental anguish associated with the surgeon's scalpel.

The first to employ ether for surgical purposes, Crawford Williamson Long effected a milestone in medical progress. The only events comparable to the dawn of anesthesia are Lister's discovery of the surgical principle of asepsis and Pasteur's researches in bacteriology. To the unearthing and utilization of these fundamentals of medical science is ascribed modern surgery's high standard. Of all scientific achievements which have made the world a richer and happier abode of heavily burdened man none has been attained with such a distinctive and characteristic motive as spurred the intellectual processes of him who first stilled the pains of surgery. There are some, unthinking and uncharitable, who believe that new discoveries are always a matter of chance. True it is that those who assiduously labor in the uncharted vineyards of the unknown, often unnoticed and unsung, unraveling and classifying the elusive truths of nature in order to add to the sum total of human knowledge, do not usually seek for the specific, but rather apply themselves with the broad perspective of the research worker. Roentgen was investigating the effect of electricity upon gases when he uncovered the x-ray. Mme. Curie in pursuing her studies in the radium field was not cognizant of the inherent possibilities for curing malignancies. However, who after mature thought would venture to say that the element of chance played an important role in these contributions! No, it is not chance, but that intangible and indefinable quality which these two scientists possessed, as did Long, that elevated them to the heights of superiority occupied by the few. As a chemical substance ether had long graced the dusty shelves of the apothecaries. Like the turbulent waters of America's rivers before the ingenuity of man harnessed it to produce electric power, ether remained a dormant substance until the observing and alert Long recognized its hidden pain-relieving features.

This most eminent son of Georgia was descended from rugged, pioneering stock which originally settled in Pennsylvania. His genealogy is deeply rooted in Irish soil, one ancestor participating in the historic siege of the ancient, walled city of Londonderry. As a boy Long's education was acquired in the academy of his native town. At an early age he matriculated at Franklin College where he received honors. He selected the University of Pennsylvania for his medical education. After graduation he "walked the wards" in a New York hospital, where he came under the inspiration of Valentine Mott and Willard Parker. Well trained for the profession of medicine, he decided to return to his native Georgia to give of his talents to the people he knew so intimately. About this time it became customary for itinerant lecturers, after the evening's program had been completed, to hold parties at which laughing gas was inhaled for its exhilarating effects. This practice became widespread. Friends of Long sought advice as to their indulging in the sport. He suggested that, as he was in no position to produce the gas, sulphuric ether having similar qualities could be substituted. Thus came into effect the "ether frolic" so common in the smaller communities of the South. The physician noticed that while the individuals were under the influence of ether the infliction of bruises and cuts apparently caused no discomfort. He therefore conceived the idea that this agent might be the means to prevent pain if inhaled during surgical operations. He wished for a favorable occasion to test his theory. The opportunity in due time presented itself. One James Venable was to undergo the removal of a tumor from his neck. Dr. Long advised the use of ether, to which he acquiesced.[2] On March 30, 1842, the operation was completed while the patient slept under the magic influence of the drug. Thus for the first time in the history of civilization was recorded the performance of surgery upon man devoid of the dreaded pangs of pain. At last the alleviation of human suffering had become a reality.

Of the man much of a complimentary

nature can be said. God-fearing, modest, self-effacing and sympathetic, touched not by the stain of commercialism, he was faithful to the ancient Oath of Hippocrates. His attitude toward his chosen work is best expressed in his own words, to wit: "My profession is a ministry from God to me." He gave his best efforts for the lowliest as well as the rich. Motivated by a fervent devotion to his duty, he would often travel long distances to attend a negress in the pains of childbirth. At the height of his practice that great calamity, which, but for the statesmanship of the distinguished Lincoln, would have rent asunder the pillars of the young American Republic, burst upon the country. When Georgia resolved to leave the Union, Long is reputed to have said, "This is the saddest day of my life." However, during the four bitter years of the conflict he gave generously of his medical services behind the lines and on the battlefield. The Civil War shattered him professionally and financially. At its close he resumed practice. Years of labor among the people he so loved began to take their toll. The rays of a full and happy existence gradually waned, and in his sixty-third year sank as the setting sun below life's horizon. Stricken as he attended a sick woman, he lingered at her bedside sufficiently long to give instruction for her care.

Such was the noble character whose worldly contribution to human progress made in an isolated backwoods village of Georgia initiated the glorious and golden period of anesthesia. In 1910, original documents, tangible evidence of his gift to science, were presented by his daughter, Frances Long Taylor, to the British Medical Association. Thus was his fame made secure among his European brethren. The same year the University of Pennsylvania in elaborate exercises commemorated the seventieth anniversary of the use of ether by unveiling to his memory a beautiful b r o n z e medallion. Postmaster-General James A. Farley[3] issued in 1940 the Dr. Crawford Williamson Long Commemorative Stamp, red in color symbolizing the "red old hills of Georgia" which have been so widely memorialized in song and legend. In the very appropriate words of the late Dr. John C. DaCosta,[4] "He was an honor to his alma mater, an ornament to his profession, a glory to his country, and a benefactor to the human race."

JOSEPH A. DOHERTY, M.D.

Editorial in The Apollonian, Boston, Mass., January, 1942.

BIBLIOGRAPHY

1. Doherty, Joseph A.: Henry Hill Hickman's Contribution to Surgical Anesthesia. Read at the Eighth Annual Congress of the American Association for the Advancement of Oral Diagnosis, the Academy of Medicine, New York City, November 14, 1941. (As yet unpublished).
2. Harper, Eugenia Long: My Father, Crawford Long, Discoverer of Ether Anesthesia. The Wisconsin Medical Journal, September, 1934.
3. Farley, Hon. James A.: Crawford Williamson Long. (Address of the Postmaster-General of the United States at the First Day Sale of the Dr. Crawford Williamson Long Commemorative Stamp, Jefferson, Ga., April 8, 1940.) Jour. Medical Assoc. of Georgia, August, 1940.
4. DaCosta, John Chalmers: Crawford W. Long. University of Pennsylvania Special Bulletin (Memorial to Dr. Crawford W. Long). April, 1912.

TREATING ACUTE MORPHINE POISONING A NEW METHOD

1. Let the patient sleep. Make no effort to arouse him. "Sleep knits up the raveled sleeve of care."
2. Wrap the patient in warm blankets and pack hot bottles or pads around him. The drop in temperature must be overcome by external heat.
3. Give one quart of strong coffee made with normal salt solution by the rectum; one-seventy-fifth of grain of atropine hypodermically and the physiologic antidote, sulfate of strychnine, the size of the dose to be determined by the weight and the condition of the patient, from one-tenth to one-fourth of a grain. Have a small bottle of chloroform with you, to relax the patient, if necessary. We have never had to use it.
4. If necessary resort to artificial respiration. The heart beats from four to six minutes after respiration ceases. In one case, we had to keep it up for four hours. On account of not having any help, after thirty minutes, we were tired out but kept the respiration going by dilating the sphincter ani to start it when it stopped.
5. Results: First case treated by the old method died. By the above method, all recovered. In the worst case which required four hours of artificial respiration, the morphine had been given hypodermically by an old doper; she said it was a small dose, only one and a half grains, and that she always took three grains for a dose. All dopers are liars, but even then they serve a purpose, they make us think.

This method was first used in 1908; reported to the Muscogee County Medical Society, but never published. It requires only one person to give it.

NEAL KITCHENS, M.D.

THE PRESIDENT'S PAGE

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OUR DUTIES AND OBLIGATIONS

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On the morning of March 20, 1849, seventy-five Georgia physicians gathered together in Macon to form a state medical society. The committee adopted a Constitution. "Article II" stated the "Objects of the Society" as follows:

"The objects of this Society shall be the advancement of medical knowledge — the elevation of professional character — the protection of the interests of its members — the extension of the bounds of medical science, and the promotion of all measures adapted to relieve suffering humanity and to protect the lives and improve the health of the community."

The present Constitution and By-Laws of the Medical Association of Georgia "Article II" — "Purposes of the Association" are:

"The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life."

This issue of The Journal carries the program of our Ninety-Third Annual Session which will be held in Augusta, April 28-May 1. It also contains a copy of our Constitution and By-Laws as amended up to date. We hope every member of the Association will re-read the entire Constitution and By-Laws lest we forget the fundamental principles of our organization.

It is particularly important that every member of the House of Delegates reread and study Chapter III of the By-Laws, "House of Delegates."

We have duties and obligations both to our profession and to the people of Georgia. Let's fulfill these duties and obligations.

Allen H. Bunce, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia

478 Peachtree Street, N. E., Atlanta, Ga.

MARCH, 1942

WELCOME

The Richmond County Medical Society extends to each member of the Medical Association of Georgia a cordial invitation to attend the ninety-third annual session at the Bon Air Hotel, Augusta, April 28-May 1.

It is our sincere wish that your stay in Augusta will be both pleasant and profitable.

Augusta has a reputation as a convention city and we will do our best to maintain it. There will be plenty of rooms available in the hotel despite present conditions.

The weather will be fine and the program will be good, so come to Augusta on April 28 and let's make the ninety-third session the best in the history of the Medical Association of Georgia.

Cordially yours,

J. Z. McDANIEL, M.D., *President*,
Richmond County Medical Society.

BLOOD PLASMA; ITS ADVANTAGES

With the Rh factor as a complicating agent in patients who have been previously transfused or in the transfusion of pregnant women, the use of plasma will become more prevalent.

It is even now not so simple a matter to prepare donors for whole blood transfusion of patients who have had whole blood within a period of two weeks, because the anti-Rh factor may disappear from the blood of patients in a comparatively short time, except in the pregnant Rh negative mother who is developing an Rh positive child. The mother may be Rh negative, but the child inherited the Rh positive factor from the father. During the period of gestation the mother develops an anti-Rh serum by the stimulating factors received from the child, and because of the blood interchange the child develops erythroblastosis; and if the mother is transfused with Rh positive blood she develops a reaction which may result in death.

The Rh factor resides in the red blood cells. If the mother with an anti-Rh serum receives blood plasma there is no reaction because there is nothing to hemolyze.

About 85 per cent of human beings are Rh positive and 15 per cent are Rh negative. If an Rh positive individual is transfused with an Rh positive donor there is no reaction. If an Rh positive patient is transfused repeatedly with an Rh negative donor, after the second transfusion there may be but a mild reaction but after the third the reaction will be of decided magnitude provided the transfusions are done within a period of ten days or so. These patients are of the same type and have a perfect match with the donor.

The logical thing to do if a patient has had previous transfusion within a period of two weeks is to determine whether patient and donor are both either Rh negative or positive.

I have recently learned that the anti-Rh serum will soon be available commercially.

The most outstanding use of plasma is, in emergency cases, where the time factor is most essential, because no Rh factor, no typing and no matching plays a part.

In burns of the skin, especially, in the early part of the treatment plasma is preferable to whole blood and fluid infusions. In cases of hemoconcentration plasma is the substance of choice.

With the exception of those patients with anemia who are actually suffering with lack of equipment to carry oxygen, plasma will answer the purpose of whole blood transfusion.

In shock one of the desirable ends to gain is increased arterial tone. Plasma proteins are very effective in developing arterial tone which will alleviate the disparity between blood volume and vascular area.

JOHN FUNKE, M.D.



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The officers of the Medical Association of Georgia urge its members to attend the Ninety-Third Annual Session to be held in the Bon Air Hotel, Augusta, April 28-May 1, 1942.

The House of Delegates will convene, Tuesday, April 28, at 2:00 P.M., War Time, in the Ballroom of the Bon Air Hotel. The scientific session will open Wednesday, April 29, at 8:30 A.M.



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Ninety-Third Annual Session

Augusta

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April 28, 29, 30, and May 1, 1942

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Allen H. Bunce (1949) Atlanta
Hal M. Davison (1949) Atlanta

Abner Wellborn Calhoun Lectureship

James E. Paullin, Chairman (1943) Atlanta
J. R. Broderick (1944) Savannah
Eugene E. Murphey (1945) Augusta
W. P. Harbin, Jr. (1946) Rome
Frank K. Boland (1942) Atlanta

Medical Economics

B. T. Beasley, Chairman Atlanta
Vernon Powell Atlanta
Major Fowler Atlanta
Grady N. Coker Canton
D. C. Kelley Lawrenceville
T. J. Busey Fayetteville
C. W. Roberts, ex-officio Atlanta

Memorial Exercises

Wm. R. Dancy, Chairman Savannah
W. A. Mulherin Augusta
J. C. Patterson Cuthbert
Grady N. Coker Canton
Frank K. Boland Atlanta

Medical History of Georgia

Sub-Committee

Frank K. Boland, Chairman Atlanta
Joseph Krafka Augusta
Cecelia Mettler Augusta
Olin H. Weaver Macon
J. Calvin Weaver Atlanta

Cancer Commission

J. L. Campbell, Chairman Atlanta
Lee Howard Savannah
A. J. Mooney, Sr. Statesboro
A. D. Little Thomasville
R. F. Wheat Bainbridge
R. C. Pendergrass Americus
W. F. Jenkins Columbus
Kenneth Hunt Griffin
Enoch Callaway LaGrange
E. L. Bishop Atlanta
J. J. Clark Atlanta
C. C. Harrold Macon
N. J. Newsome Sandersville
David L. Wood Dalton
Z. V. Johnston Calhoun
B. H. Minchew Waycross
S. T. R. Revell Louisville
Charles R. Andrews Canton
Hartwell Joiner Gainesville
W. H. Roberts Augusta
H. E. Talmadge Athens

Executive Committee, Women's Field Army of the American Society for the Control of Cancer

J. L. Campbell, Chairman Atlanta
E. L. Bishop Atlanta
J. J. Clark Atlanta
Robert C. Pendergrass Americus
Enoch Callaway LaGrange
C. C. Harrold Macon
T. F. Abercrombie Atlanta

Orthopedics

Fred G. Hodgson, Chairman Atlanta
T. P. Goodwin Atlanta
H. M. Michel Augusta
F. Bert Brown Savannah
J. Hiram Kite Atlanta
L. H. Muse Atlanta

Ophthalmology

Grady E. Clay, Chairman Atlanta
S. J. Lewis Augusta
E. N. Maner Savannah

Francis B. Blackmar Columbus
H. M. Moore Thomasville
J. R. Childs Atlanta
Herschel C. Crawford Atlanta

Syphilis

Harold P. McDonald, Chairman Atlanta
J. T. McCall Rome
Roy R. Kracke Emory University
J. Z. McDaniel Augusta
Willis P. Jordan Columbus
Wallace Bazemore Macon
John C. Keaton Albany
Harry Righton Savannah
R. F. Wheat Bainbridge
L. W. Pierce Waycross
Hartwell Joiner Gainesville
R. H. McDonald Newnan

Industrial Health

Thos. P. Goodwyn, Chairman Atlanta
J. W. Simmons Brunswick
C. F. Holton Savannah
W. W. Battey Augusta
W. W. Chrisman Macon
A. N. Dykes Columbus
J. Harry Rogers Atlanta
R. E. Newberry Atlanta
C. W. Roberts, ex-officio Atlanta

Clinical Pathology

A. J. Ayers, Chairman Atlanta
Roy R. Kracke Emory University
Walter W. Daniel Atlanta
A. R. Rozar Macon
D. R. Venable Columbus
R. Lee Rogers Gainesville

Tuberculosis

Champneys H. Holmes, Chairman Atlanta
Enoch Callaway LaGrange
H. C. Schenck Atlanta
C. D. Whelchel Gainesville
W. C. Cook Columbus
R. C. McGahee Augusta
E. F. Wahl Thomasville
R. V. Martin Savannah
C. M. Sharp Alto
H. C. Atkinson Macon

Scientific Exhibit

W. F. Hamilton, Co-Chairman Augusta
Francis Parker, Co-Chairman Emory University
Robert Drane Savannah
Lee Howard Savannah
B. E. Collins Waycross
Joseph Yampolsky Atlanta
Wm. F. Lake Atlanta
Edgar R. Pund Augusta
John E. Walker Columbus
Helen W. Bellhouse Thomasville
R. N. Johnson Rome

ADVISORY

Woman's Auxiliary

James N. Brawner, Chairman Smyrna
Eustace Allen Atlanta
R. V. Schultz Atlanta
Ralph H. Chaney Augusta
H. G. Banister Ila
Lee Howard Savannah

Post-Graduate Study

G. Lombard Kelly, Chairman Augusta
Russell H. Oppenheimer Emory University
Richard Torpin Augusta
Olin S. Cofer Atlanta
H. C. Sauls Atlanta
Roy A. Hill Thomasville
W. F. Reavis Waycross
J. C. Patterson Cuthbert

Georgia State Medical Association (Negro)

M. T. Harrison, Chairman Atlanta
W. E. Story Columbus
R. C. Maddox Rome
J. F. Hanson Macon
H. H. Allen Decatur

Pediatrics

W. W. Anderson, Chairman Atlanta
A. J. Waring Savannah
Frank Schley Columbus

Appendicitis

T. C. Davison, Chairman Atlanta
J. K. Quattlebaum Savannah
Charley K. Wall Thomasville
J. C. Patterson Cuthbert
Fred F. Rudder Atlanta
F. B. Rawlings Sandersville
B. Lester Harbin Rome
Kenneth McCullough Waycross
R. L. Rogers Gainesville
S. D. Brown Royston
Enoch Callaway LaGrange

Awards

Wm. R. Dancy, Chairman Savannah
T. S. Gatewood Americus
Mather M. McCord Rome
Ralph H. Chaney Augusta
W. F. Reavis Waycross

Maternal Mortality and Infant Deaths

H. F. Sharpley, Jr., Chairman Savannah
C. B. Upshaw Atlanta
Richard Torpin Augusta
A. H. Hilsman Albany
David M. Wolfe Atlanta

National Youth Administration

C. L. Ayers, Chairman Toccoa
Shelley C. Davis Atlanta
T. F. Abercrombie Atlanta
M. C. Pruitt Atlanta

FRATERNAL DELEGATES TO OTHER STATE MEETINGS

Alabama: R. F. Wheat, Bainbridge; Don F. Cathcart, Atlanta; W. P. Phillips, LaGrange.

Florida: Mark S. Dougherty, Jr., Atlanta; W. F. Reavis, Waycross; Harold P. McDonald, Atlanta.

North Carolina: C. W. Roberts, Atlanta; R. M. Harbin, Jr., Rome; C. D. Whelchel, Gainesville.

South Carolina: G. Lombard Kelly, Augusta; V. P. Sydenstricker, Augusta; Grady N. Coker, Canton.

Tennessee: Z. V. Johnston, Calhoun; M. M. McCord, Rome; Trammell Starr, Dalton.

STATE BOARD OF MEDICAL EXAMINERS

Claude Griffin, President.....Atlanta
Harold P. McDonald, Vice-President.....Atlanta
M. B. Copeloff.....Atlanta
R. F. Wheat.....Bainbridge
Steve P. Kenyon.....Dawson
J. W. Palmer.....Ailey
G. T. Lyon.....Roswell
L. G. Neal.....Cleveland
J. B. Warnell.....Cairo

STATE BOARD OF HEALTH*

First District: J. C. Metts, Savannah, Sept. 1, 1945.
Second District: C. K. Sharp, Arlington, Sept. 1, 1945.
Third District: Mr. R. C. Ellis, Americus, Sept. 1, 1942.
Fourth District: J. A. Corry, Barnesville, Sept. 1, 1943.
Fifth District: Mr. Robt. F. Maddox, Atlanta, Sept. 1, 1942.
Sixth District: C. L. Ridley, Macon, Sept. 1, 1944.
Seventh District: W. P. Harbin, Jr., Rome, Sept. 1, 1944.
Eighth District: Henry W. Clements, Adel, Sept. 1, 1944.
Ninth District: Robt. L. Rogers, Gainesville, Sept. 1, 1945.
Tenth District: D. N. Thompson, Elberton, Sept. 1, 1943.

*Nominated by their respective district medical societies and appointed for six year terms.

STATE OF GEORGIA AT LARGE

*Dental Association**

W. K. White, Savannah, Sept. 1, 1945.
J. G. Williams, Atlanta, Sept. 1, 1945.

*Nominated by the Georgia Dental Association.

*Pharmaceutical Association**

M. D. Hodges, Marietta, Sept. 1, 1941.
John W. White, Thomasville, Sept. 1, 1947.

*Nominated by the Georgia Pharmaceutical Association.

DISTRICT SOCIETIES

OFFICERS AND MEETING DATES

First District

President—J. M. Byne, Jr., Waynesboro
Secretary—Wm. D. Wilson, Savannah
Third Wednesdays—March and July

Second District

President—J. V. Rogers, Cairo
Secretary—J. C. Brim, Pelham
Second Fridays—April and October

Third District

President—W. G. Elliott, Cuthbert
Secretary—Willis P. Jordan, Columbus
Third Wednesday in June and Second Wednesday in November

Fourth District

President—H. J. Copeland, Griffin
Secretary—M. M. Head, Zebulon
Second Wednesdays in February and August

Fifth District

President—C. W. Roberts, Atlanta
Secretary—A. Worth Hobby, Atlanta
No set dates.

Sixth District

President—W. W. Chrisman, Macon
Secretary—Thos. L. Ross, Jr., Macon
Last Wednesday in June and First Wednesday in December

Seventh District

President—J. M. McGehee, Cedartown
Secretary—W. D. Hall, Dalton
First Wednesday in April and last Wednesday in September

Eighth District

President—C. A. Witmer, Waycross
Secretary—G. T. Crozier, Valdosta
Second Tuesdays—April and October

Ninth District

President—S. T. Ross, Winder
Secretary—Pratt Cheek, Gainesville
Third Tuesdays—February and August

Tenth District

President—Stewart D. Brown, Royston
Secretary—J. Z. McDaniel, Augusta
Second Wednesdays—February and August

DELEGATES TO THE 1942 SESSION

Counties	*Names and Addresses*
Appling	H. C. McCracken, Baxley
Baldwin	
Bartow	H. B. Bradford, Cartersville
Ben Hill	
Bibb	C. L. Ridley, Macon
	J. B. Kay, Byron
Blue Ridge	A. K. Ducket, Blue Ridge
Brooks	L. A. Smith, Quitman
Bulloch-Candler-Evans	A. J. Mooney, Statesboro
Burke	J. M. Byne, Jr., Waynesboro
Butts	R. L. Hammond, Jackson
Carroll	H. L. Barker, Carrollton
Chatham	C. F. Holton, Savannah
	H. J. Morrison, Savannah
Chattooga	W. U. Hyden, Trion
Cherokee	C. J. Roper, Jasper
Clarke-Madison-Oconee	W. H. Gholston, Danielsville
Clayton-Fayette	
Cobb	M. M. Hagood, Marietta
Coffee	
Colquitt	J. B. Woodall, Moultrie
Coweta	
Crisp	P. L. Williams, Cordele
Decatur-Seminole	R. F. Wheat, Bainbridge
DeKalb	
Dooly	E. B. Davis, Byromville
Dougherty	P. L. Hilsman, Albany
Douglas	
Elbert	G. A. Ward, Elberton
Emanuel	J. H. Chandler, Swainsboro
Floyd	Robert E. Norton, Rome

Forsyth
Franklin
Fulton.....Major F. Fowler, Atlanta
George W. Fuller, Atlanta
Edgar H. Greene, Atlanta
Eustace A. Allen, Atlanta
C. C. Aven, Atlanta
Chas. E. Rushin, Atlanta
J. R. Childs, Atlanta
Shelley C. Davis, Atlanta
B. L. Shackleford, Atlanta
Glynn.....J. C. Hume, St. Simons Island
Gordon.....W. D. Hall, Calhoun
Grady.....J. V. Rogers, Cairo
Greene
Gwinnett.....W. W. Puett, Norcross
Habersham.....D. H. Garrison, Clarkesville
Hall.....L. G. Neal, Cleveland
Hancock.....C. S. Jernigan, Sparta
Haralson.....C. H. Allen, Bremen
Hart.....
Henry.....R. V. Brandon, McDonough
Houston-Peach
Jackson-Barrow
Jasper.....E. M. Lancaster, Shady Dale
Jefferson
Jenkins.....C. Thompson, Millen
Lamar
Laurens.....E. B. Claxton, Dublin
South Georgia—Berrien-Clinch-Cook-
Echols-Lanier-Lowndes W. W. Turner, Nashville
Macon
McDuffie.....F. N. Gibson, Thomson
Meriwether.....R. B. Gilbert, Greenville
Mitchell.....J. C. Brim, Pelham
Monroe
Montgomery H. C. Sharp, Alston
Morgan
Muscogee
Newton
Ocmulgee—Bleckley-Dodge-
Pulaski H. W. Long, Eastman
Polk.....P. O. Phaueron, Cedartown
Rabun
Randolph W. D. Martin, Shellman
Richmond.....R. C. McGahee, Augusta
D. R. Thomas, Augusta
Rockdale.....H. E. Griggs, Conyers
Screven
Spalding.....Geo. L. Walker, Griffin
Stephens
Sumter.....Schley Gatewood, Americus
Tattnall.....L. V. Strickland, Cobbtown
Taylor.....R. C. Montgomery, Butler
Telfair
Thomas.....E. F. Wahl, Thomasville
Tift.....C. S. Pittman, Tifton
Toombs
Tri Society—Calhoun-Early-Miller
Tri Society—Liberty-Long-McIntosh
C. O. Williams, West Point
Turner
Upson.....R. L. Carter, Thomaston
Walker-Catoosa-Dade.....F. H. Simonton, Chickamauga
Walton.....Philip R. Stewart, Monroe
Ware.....W. F. Reavis, Waycross
Warren.....H. B. Cason, Warrenton
Washington.....R. L. Taylor, Davisboro
Wayne.....A. J. Gordon, Jesup
Whitfield.....H. J. Ault, Dalton
Wilcox
Wilkes.....H. L. Cheves, Union Point
Worth

ENTERTAINMENTS

TUESDAY, APRIL 28, 9:00 P.M.
COUNTRY CLUB
Cocktail Party

WEDNESDAY, APRIL 29, 5:00 P.M.
COUNTRY CLUB
Tea

WEDNESDAY, APRIL 30, 6:30 P.M.
BON AIR HOTEL

Annual dinner of the alumni of Emory University School of Medicine. W. H. Roberts, Chairman.

Annual dinner of the alumni of the University of Georgia School of Medicine. M. P. Agee, Chairman.

THURSDAY, APRIL 30, 1:00 P.M.

Annual luncheon of the Urological Association at Pent House.

Annual luncheon of the Eye, Ear, Nose & Throat Association at Pent House.

Annual luncheon of the Radiological Association, Crystal Room, Bon Air Hotel.

Annual luncheon of the Pediatric Society, Crystal Room, Bon Air Hotel.

THURSDAY, APRIL 30, 7:30 P.M.
BON AIR HOTEL

Banquet.....7:30 to 10:00
Toastmaster
Dance.....10:00 to 1:00

ANNOUNCEMENTS

Meetings will be held in the Bon Air Hotel.

Be sure to go to the Registration Desk immediately after your arrival, present your 1942 membership card, register and procure a badge.

Discussion of papers is open to all members and guests of the Association; it is not limited to those named on the program.

On arising to discuss a paper the speaker will please announce his name and address clearly for the benefit of the Association and the stenographer.

Meetings will be called to order at the hour fixed on the program. It is especially desired that the members be prompt in their attendance.

All manuscript should be typewritten, double spaced, and on one side of the paper only. Papers must be handed to the Secretary immediately after being read.

IMPORTANT NOTICE!

Delegates must present written credentials to the Committee on Credentials from the House of Delegates to secure delegates' badges.

Members may not take part in the proceedings until they have registered and procured official badges.

PUBLIC MEETINGS

BON AIR HOTEL, AUGUSTA

WEDNESDAY, APRIL 29, 8:30 A.M.

WAR TIME

Opening Meeting

WEDNESDAY, APRIL 29, 8:00 P.M.

WAR TIME

Presentation of the President's Gold Key to Allen Hamilton Bunce, Atlanta, by W. A. Selman, Atlanta.

THURSDAY, APRIL 30, 12:00 Noon

WAR TIME

Bon Air Hotel

President's Address

Medical Problems of 1942

Allen Hamilton Bunce, Atlanta

The President's Address will be at an open session to which the public and visitors are invited.

Memorial Exercises

William R. Dancy, Savannah

Chairman, Committee on Necrology

MEETINGS OF THE HOUSE OF DELEGATES

BON AIR HOTEL

TUESDAY, APRIL 28,, 2:00 P.M.

WAR TIME

First meeting of the House of Delegates

1. Call to order by the President
2. Roll call
3. Appointment of Reference Committees
4. Reports of officers:
 - President
 - President-Elect
 - Vice-Presidents
 - Parliamentarian
 - Secretary-Treasurer: Financial report.
 - Reports of Delegates to the A.M.A.
5. Reports of committees:
 - Scientific Work
 - Public Policy and Legislation
 - Arrangements
 - Medical Defense
 - Hospitals
 - Necrology
 - Cancer Commission
 - History
 - Abner Wellborn Calhoun Lectureship
 - Awards
 - Advisory—State Board of Health
 - Advisory—Woman's Auxiliary
 - Medical Economics
 - Post-Graduate Study
 - Orthopedics—Advisory, State Department of Public Welfare
 - Ophthalmology — Advisory, State Department of Public Welfare
 - Syphilis
 - Tuberculosis
 - Special Committees
 - Scientific Exhibit
6. Unfinished business
7. New business

TUESDAY, APRIL 28, 8:00 P.M.

WAR TIME

Second Meeting of the House of Delegates

1. Call to order by the President
2. Reading of minutes
3. Announcements
4. Report of President of Woman's Auxiliary
5. Reports of committees continued
6. Reports of Fraternal Delegates
7. Unfinished Business
8. New Business

FRIDAY, MAY 1, 8:00 A.M.

WAR TIME

BON AIR HOTEL

Third Meeting of the House of Delegates

1. Call to order by the President
2. Reading of minutes
3. Reports of committees
4. Unfinished business
5. New business

OFFICIAL REPORTER

Miss Winifred H. McLean.....Gastonia, N. C.

MEETING OF THE COUNCIL

TUESDAY, APRIL 28, 6:30 P.M.

WAR TIME

BON AIR HOTEL

The first meeting of the Council will be held in the Bon Air Hotel, Tuesday, April 28, following the afternoon session of the House of Delegates. Each Councilor will render a report of conditions in each county of his district. Other meetings of the Council will be held on the call of the chairman.

WEDNESDAY, APRIL 29, 8:30 A.M.

WAR TIME

BON AIR HOTEL

AUGUSTA

SCIENTIFIC PROGRAM

The papers for each meeting must be read as scheduled on the program.

Call to order by the President, Allen Hamilton Bunce, Atlanta.

Invocation
Rev. Hamilton West, Augusta
Rector, St. Paul's Episcopal Church
Address of Welcome
J. Z. McDaniel, Augusta
President, Richmond County Medical Society
Response to Address of Welcome
Lee Howard, Savannah

SCIENTIFIC PROGRAM

The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.

1. Symposium on Public Health Problems
 (a) Nutrition in a State Health Program
 T. F. Abercrombie
 (b) Community Public Health
 Guy G. Lunsford, Atlanta
 (c) Public Health Education in a Medical School
 E. S. Sanderson, Augusta
 (d) Public Health Education for Laymen
 Justin Andrews, Atlanta
 (e) Industrial Health in Georgia
 L. M. Petrie, Atlanta
 (f) Public Health in National Defense
 J. D. Applewhite, Macon
 (g) The Organized Cancer Clinic and State Aid in Georgia
 G. T. Bernard, Augusta
 To lead the discussion:
 J. L. Campbell, Atlanta
 Chas. C. Harrold, Macon
 B. H. Minchew, Waycross
2. Fungus Infections of the Skin
 R. M. Reifler, Macon
3. Occupational Diseases of the Skin
 Samuel Rosen, Savannah
 To lead the discussion on papers by Drs. Reifler and Rosen:
 Philip Nippert, Atlanta
 Roy E. Butler, Augusta

WEDNESDAY, APRIL 29, 12:00 Noon
WAR TIME
BON AIR HOTEL

ABNER WELLBORN CALHOUN LECTURE

Sulfonamide Therapy: Its Applications and Limitations
Perrin H. Long, Baltimore

Professor of Preventive Medicine, Johns Hopkins University School of Medicine, Baltimore; member of the American Society of Bacteriologists; member of the American Society of Clinical Investigation; and the Society of Experimental Biology and Medicine.

WEDNESDAY, APRIL 29, 2:00 P.M.
WAR TIME
BON AIR HOTEL

The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.

1. Symposium on the Psychoses and Psychoneuroses
 (a) Electric Shock Therapy
 Hervey Cleckley, Augusta
 (b) The Chronic Fatigue States
 J. C. Metts, Savannah
 (c) Stilbestrol Treatment for the Involution Psychoses (Distaff)
 H. D. Allen, Jr., Milledgeville
 (d) The Neurotic Personality
 W. W. Young, Atlanta
 (e) The Nervous Patient, the Family Physician and the Consulting Physician
 Ernest F. Wahl, Thomasville
 (f) The Role of Nutrition in Mental Health and in Mental Disease
 James N. Brawner, Atlanta
 James N. Brawner, Jr., Atlanta
 (g) Military Neuropsychiatric Diseases of the Present War
 E. H. Parsons, Major, M. C., U. S. Army, Lawson General Hospital, Atlanta
 To lead the discussion:
 C. G. Cox, Milledgeville
 J. A. Redfearn, Albany
2. A New Syndrome of Nocturnal Frequency Due to Endocrine Imbalance
 Robert B. Greenblatt, Augusta
3. Carcinoma of the Bladder and Prostate—Some New Methods in Management
 Harold P. McDonald, Atlanta
 To lead the discussion on papers by Drs. Greenblatt and McDonald:
 J. Righton Robertson, Augusta
 S. Elliott Wilson, Savannah

WEDNESDAY, APRIL 29, 8:00 P.M.
WAR TIME
BON AIR HOTEL

Presentation of the President's Gold Key to the President, Allen Hamilton Bunce, Atlanta, by W. A. Selman, Atlanta.

Human Versus Material Values in Medical Practice
C. W. Roberts, Atlanta

Medical Problems: National, Economic and Scientific
Frank H. Lahey, Boston
President
American Medical Association

Crawford Williamson Long, 1815-1878
T. J. Collier, Atlanta

THURSDAY, APRIL 30, 8:30 A.M.
WAR TIME
BON AIR HOTEL

The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.

1. Symposium on Eye, Ear, Nose and Throat Problems
 (a) Aneurysm in the Upper Eyelid: Report of case
 S. J. Lewis, Augusta
 (b) Dacryocystorhinostomy: the Logical Treatment for Occlusion of the Lacrimal Sac
 Alton V. Hallum, Atlanta
 (c) The Treatment and Care of Common Eye Injuries

William O. Martin, Jr., Atlanta

(d) Osteomyelitis of the Frontal Bone
Lester Brown, Atlanta

(e) Laryngeal Tumors: Voice Recordings Before and After Operation.
Murdock Equen, Atlanta
To lead the discussion:
George Smith, Rome
H. M. Moore, Thomasville

2. Complications in the Matching of Blood for Transfusion
John Funke, Atlanta
3. The Blood Registry of the West End Civitan Club, Atlanta
Chas. K. Howard, Atlanta
To lead the discussion on papers by Drs. Funke and Howard
Roy R. Kracke, Emory University
Max Mass, Macon
4. The Care of Premature Infants
William Willis Anderson, Atlanta
To lead the discussion:
Wm. A. Mulherin, Augusta
Helen Bellhouse, Thomasville
5. Medical Ethics
Jno. W. Simmons, Brunswick

THURSDAY, APRIL 30, 12:00 Noon
WAR TIME
BON AIR HOTEL
PRESIDENT'S ADDRESS
Medical Problems of 1942
Allen Hamilton Bunce, Atlanta

MEMORIAL EXERCISES
William R. Dancy, Savannah
Chairman, Committee on Necrology

THURSDAY, APRIL 30, 2:00 P.M.
WAR TIME
BON AIR HOTEL

The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.

1. Bronchiectasis
Carl C. Aven, Atlanta
2. Treatment of Lung Abscess with Alcohol Intravenously
Robert F. Norton, Rome
John T. McCall, Jr., Rome
3. Obliteration of Chronic Empyema Cavities
Robert C. Major, Atlanta
To lead the discussion on papers by Drs. Aven, Norton, McCall and Major:
C. D. Whelchel, Gainesville
C. M. Sharp, Alto
4. Symposium on the Roentgenologic Problems of the Gastro-Intestinal Tract
(a) Lesions of the Esophagus and Stomach
William F. Lake, Atlanta
(b) Peptic Ulcer, Gastric and Duodenal; and Other Duodenal Lesions
R. C. Pendergrass, Americus
(c) Diagnostic Methods Utilized in the Study of the Colon, with Consideration of the Various Types of Disease Found
James J. Clark, Atlanta
(d) Roentgenologic Studies of the Right Lower Quadrant of the Abdomen
A. A. Rayle, Atlanta
(e) Roentgenologic Studies of the Gallbladder
J. W. Landham, Atlanta
To lead the discussion:
L. P. Holmes, Augusta
Robert Drane, Savannah

FRIDAY, MAY 1, 1942, 8:30 A.M.
WAR TIME
BON AIR HOTEL

The time allotted to each paper, which INCLUDES the showing of slides or moving pictures, is 12 minutes.

1. Renal Hypertension
William P. Harbin, Jr., Rome
2. Functional Disorders of the Circulation
H. C. Sauls, Atlanta
Carter Smith, Atlanta
Charles F. Stone, Atlanta
To lead the discussions on papers by Drs. Harbin, Sauls, Smith, and Stone:
W. F. Hamilton, Augusta
J. R. Broderick, Savannah
3. Symposium on Surgical Problems
(a) The Problems Concerned in Decreasing Pain in Anorectal Surgery
M. C. Pruitt, Atlanta
(b) The Frequent Association of Thymic Lesions with Myasthenia Gravis
D. Henry Poer, Atlanta
H. A. Seaman, Waycross
(c) Toxic Goiter and Its Treatment
T. C. Davison, Atlanta
(d) Follow-up Studies of 400 Major Gynecologic Operations
Richard Torpin, Augusta
A. Miller, Augusta
(e) The Vaginal Approach to Pelvic Disease
Shelley Davis, Atlanta
(f) Sudeck's Acute Bone Atrophy (Traumatic)
F. B. Brown, Savannah
To lead the discussion:
Kenneth Hunt, Griffin
Chas. H. Richardson, Macon
W. A. Selman, Atlanta
J. H. Sherman, Augusta

FRIDAY, MAY 1, 12:00 Noon
WAR TIME
BON AIR HOTEL
ELECTION OF OFFICERS

President-Elect
First Vice-President
Second Vice-President
Two Delegates to the A.M.A.
Two Alternate Delegates to the A.M.A.

*Councilors for the First, Second, Third and Fourth Districts

*Two members of the State Board of Health from the Third and Fifth Districts

Selection of meeting place for 1943.

*Nominated by their respective district societies.

CONSTITUTION AND BY-LAWS

Chapter II. Section 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Chapter VIII. Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Chapter VIII. Section 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

No miscellaneous or business matters will be discussed before the scientific meetings, but will be referred to the House of Delegates.

Resolution Adopted 1921

Resolved: That a member who sends in a title of a paper to be placed on the program and is not present to read the paper shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

Notice to Members Participating in the Scientific Exhibit

Three certificates of merit, to be known as first, second and third prizes, will be given by the Committee on Scientific Work to the three outstanding exhibits at this session of the Medical Association of Georgia. These will be judged on the first day of the session.

We are instructed by the President to announce to all essayists that the sessions of the Scientific Program of the Association will begin on time, and that the above regulations of the By-Laws in reference to the program will be strictly enforced.

Committee on Scientific Work

Wm. R. Dancy, Savannah, Chairman
Richard Binion, Milledgeville
Mark S. Dougherty, Jr., Atlanta
Edgar D. Shanks, Atlanta, Secretary-Treasurer

TECHNICAL EXHIBIT

5. Eli Lilly and Company, Indianapolis, Indiana.
6. General Electric X-Ray Corporation, 205 Spring Street, N. W., Atlanta, and Chicago.
7. Wachtel's Physician Supply Company, P. O. Box 623, Savannah.
8. Burroughs Wellcome Company, 9-11 East 41st Street, New York City. S. H. Jacobs, 3000 Piedmont Road, N. E., Atlanta.
9. John Wyeth & Brother, 1600 Arch Street, Philadelphia.
10. A. S. Aloe Company, 1819 Olive Street, St. Louis. Robert L. Kemper, P. O. Box 1313, Atlanta.
13. I. L. Nichols Prescription Products Division, The Borden Company, 350 Madison Avenue, New York City.
14. Ayerst, McKenna & Harrison, Rouses Point, New York; Montreal and Quebec, Canada.
16. Lederle Laboratories, 30 Rockefeller Plaza, New York City; 139 Forrest Avenue, N.E., Atlanta.
17. Van Pelt & Brown, 503 East Franklin Street, Richmond, Va.
18. Winthrop Chemical Company, 170 Varick Street, New York City
19. Philip Morris & Company, 119 Fifth Avenue, New York City.
21. Ciba Pharmaceutical Products, Summit, New Jersey.
22. Denver Chemical Manufacturing Company, 163 Varick Street, New York City.
25. Ortho Products, Linden, New Jersey.
26. E. R. Squibb & Sons, 745 Fifth Avenue, New York City.
27. American Surgical Supply Company, 378 Peachtree Street, N.E., Atlanta.
28. Surgical Selling Company, 139 Forrest Avenue, N.E., Atlanta.
30. R. J. Reynolds Tobacco Company, Camel Cigarettes, Winston-Salem, North Carolina; William Esty & Company, 100 East 42nd St., New York City.
31. The Harrower Laboratory, Inc., Glendale, California.
32. The Wm. S. Merrell Company, Lockland Station, Cincinnati, Ohio.
33. Max Wocher & Son, 29-31 West Sixth Street, Cincinnati, Ohio; C. F. Lunsford, P. O. Box 1315, Atlanta.
34. Mead Johnson & Company, Evansville, Indiana.

IN MEMORIAM

Askew, Pleasant Henry, Jr., Nashville, May 31, 1941.

Bagley, J. B., Waresboro, December 30, 1941, aged 76

Bailey, Thomas Sargent, Newnan December 13, 1941, aged 66.

Branch, Arthur Clifton, Glennville, September 30, 1941, aged 58.

Bryson, Robert Irvine, Augusta, June 4, 1941, aged 55.

Canning, Gustave T., Athens, January 3, 1942, aged 71.

Chason, Thomas, Donalsonville, November, 24, 1941, aged 69.

Clements, James Richard, Pelham, May 24, 1941, aged 65.

Clower, R. J., Morven, January 12, 1942, aged 69.

Coile, Frank West, Winterville, December 14, 1941, aged 77.

Cone, Rufus L., Statesboro, August 1, 1941, aged 62.

Dean, Jarvis Gipson, Dawson, September 11, 1941, aged 83.

Ellis, S. Thomas, Claxton, January 13, 1942, aged 73.

Fite, Berry W., Resaca, January 13, 1942, aged 80.

Garrison, William Henry, Clarkesville, November 12, 1941, aged 58.

Gilmore, Eugene Leffler, Tallapoosa, November 16, 1941, aged 73.

Greer, Charles A., Oglethorpe, October 9, 1941, aged 69.

Hale, Blair Cantrell, Rossville, February 25, 1942, aged 55.

Hall, Warren Lee, Nicholls, November 20, 1941, aged 52.

Hammond, John Hill, LaFayette, November 26, 1941, aged 85.

Horne, James Madison, Finleyson, April 26, 1941, aged 74.

Johnson, James Henry, Columbus, May 11, 1941, aged 75.

Kitchin, Samuel Cathcart, Louisville, December 22, 1941, aged 50.

Kirby, Ellis Grover, Bowdon, August 9, 1941, aged 56.

Lane, Isaac H., LaGrange, February 25, 1942, aged 76.

Martin, John W., Macon, December 17, 1941, aged 71.

McCulloh, Hugh, Sr., West Point, June 2, 1941, aged 68.

McMichael, Jack Richard, Quitman, October 6 ,1941, aged 57.

Merritt, Thomas M., Americus, March 30, 1941, aged 77.

Myers, William Herman, Savannah, July 17, 1941, aged 62.

Peek, Charles W., Cedartown, March 1, 1942, aged 76.

Prather, William Stuart, Americus, November 12, 1941, aged 83.

Reddick, Alton Bowie, Sylvania, January 13, 1942, aged 56.

Sapp, Eli Franklin, Albany, February 11, 1942, aged 71.

Shields, Jacob Alex, LaFayette, July 28, 1941, aged 66.

Slaughter, Richard Franklin, Augusta, July 4, 1941, aged 35.

Story, John Wesley, Perry, November 4, 1941, aged 70.

Traylor, George Albert, September 15, 1941, aged 61.

Usher, John Arte, Savannah, July 15, 1941, aged 64.

Williams, Ledford A., Abbeville, May 13, 1941, aged 75.

Wood, Charles Van, Cedartown, December 23, 1941, aged 66.

Wood, James Posey, Cedar Grove, September 29, 1941, aged 71.

This list of deceased physicians has been compiled since our 1941 annual session as their names appear on our records. Please notify the Secretary-Treasurer of any errors or omissions.

MORE MILK URGED FOR ADULT DIETS

Army nutritionists' insistence on a daily ration of fresh fluid milk for every U. S. soldier is evidence that the adults need milk almost as much as children.

Recent experiments by recognized scientists also confirm the daily adult need for milk and dairy products.

Studies show that the adult who omits milk from the diet is very likely to be deficient in calcium as the customary foods eaten do not provide enough of this mineral so highly essential for bones, firm muscles, good teeth, and as an antidote for irritability.

CONSTITUTION AND BY-LAWS OF THE MEDICAL ASSOCIATION OF GEORGIA

Constitution

ARTICLE I.—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Medical Association of Georgia.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component societies shall consist of those county societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

Section 1. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this Association shall be the members of the component county medical societies to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of the Association, and shall consist of: (1) delegates elected by the component county societies; (2) the officers of the Association enumerated in Section 1 of Article IX of the Constitution; (3) ex-presidents and delegates to the American Medical Association.

ARTICLE VI.—COUNCIL

The Council shall be the Board of Trustees and Finance Committee of the Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into session as provided in the Constitution and By-Laws.

It shall consist of the Councilors, the President, the President-Elect and the Secretary-Treasurer of the Association. Five of its members shall constitute a quorum.

ARTICLE VII.—SESSIONS AND MEETINGS

Section 1. The annual session shall take place on the second Wednesday in May at such place as shall be

designated by the Association, provided that in case of conflict with the annual session of the American Medical Association or on petition of the county society of the host city made at least six months before the fixed dates for the annual session, the Council may change the dates by publishing a notice in the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA three months before the session.

Sec. 2. Special meetings of either the Association or the House of Delegates may be called by a two-thirds vote of the Council, or upon the petition of twenty delegates.

ARTICLE VIII.—SECTIONS AND DISTRICT SOCIETIES

Section 1. The House of Delegates may provide for a division of the scientific work of the Association into appropriate sections, and for the organization of such Councilor district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE IX.—OFFICERS

Section 1. The officers of this Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and one Councilor for each congressional district in the State.

Sec. 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual meeting of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume his office as President immediately after the next annual meeting following his election. The terms of the Councilors shall be for three years, as may be arranged, viz: the Councilor for the first, second, third and fourth districts for three years; those for the fifth, sixth, seventh, and eighth districts for one year; those for the ninth and tenth districts for two years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed. (1933.)

Sec. 3. The officers of this Association shall be elected by ballot at 12 o'clock noon on the third day of the annual session. Nomination for office shall be made orally, but the nominating speech must not exceed two minutes. The Councilors shall be elected at the same time on nomination by their respective district societies at the annual meetings of such societies preceding the annual session of the Association at which the vacancies occur, but if no nomination from a district society is brought before the Association, the nomination for Councilor may be presented from the floor. If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on the second ballot, the two names receiving the highest number of ballots shall be voted on until an election occurs. Delegates to the American Medical Association shall be elected at the same time and in the same manner.

Sec. 4. The members of the State Board of Health shall be nominated by their respective district societies at the annual meeting of such societies preceding the annual session of this Association, and in failure of nomination by district societies, they may be nominated by the delegates present from each of the district societies, all of which shall be ratified by this Association.

ARTICLE X.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of $10.00 per capita per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be approved by the Finance Committee before action is taken thereon.

ARTICLE XI.—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

ARTICLE XII.—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual session; and for its adoption at such session shall require a two-thirds vote of all present and voting.

By-Laws

CHAPTER I.—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Special memberships. In addition to regular members, component societies may elect to membership in their organizations, for membership in this Association, the following groups of members:

(a) *Honorary members.* Any member for old age, length of service, or other good reasons, may be elected an honorary member of his county medical society, for

membership in this Association. Such member shall, after election, be issued a certificate of honorary membership in this Association.

Non-resident physicians and resident or non-resident lay persons who have distinguished themselves in fields of endeavor devoted to the advancement of human welfare, may be nominated by county medical societies, or by the House of Delegates of this Association, for honorary membership in this Association. A county medical society shall not nominate for this class of membership more than one person each year. The name of such person shall be sent to the Secretary-Treasurer of this Association thirty days in advance of the annual session. Such person shall be issued an appropriate certificate of honorary membership in this Association if, and when, he is elected to honorary membership by this Association.

(b) *Associate members.* Eligible to this classification are (1) those regular members of component societies to whom the payment of dues would be an undue hardship; (2) interns, and (3) commissioned medical officers (see Chapter VII, Sec. 5 of these By-Laws) of the United States Army, the United States Navy and the United States Public Health Service while engaged actively in their respective services or if they have been retired on account of age or physical disability, or, after long and honorable service, under the provisions of an Act of Congress.

(c) Honorary and Associate members shall not be subject to the payment of dues to the State Association. They shall enjoy the privilege of full participation in the scientific, social and educational activities of this Association. They shall not vote nor hold office and do not receive the Journal or benefits of Medical Defense.

Sec. 5. Any physician applying for membership in a component medical society of this Association, who has previously practiced in a county in which affiliation with a component society is provided, and who moves to another county without having affiliated with the medical society in the jurisdiction of previous residence, before he is admitted to membership, the cause for his lack of affiliation in the society of his previous residence shall be ascertained.

CHAPTER II.—GENERAL MEETINGS

Section 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. Visitors duly accredited to represent the associations of other states, or of the District of Columbia, not exceeding two in number for each organization, may attend upon, and participate in, the discussion of the general meetings, but shall not have a vote. Such delegates may read papers upon invitation of the Committee on Scientific Work. The general meetings shall be presided over by the President or by one of the Vice-Presidents.

Sec. 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Sec. 3. Entertainments. Any social entertainment which may be given by this Association shall be confined to the evening of the second day.

Sec. 4. Guests. Any physician not a resident of this State but a member of his state association, or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

CHAPTER III.—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegate from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. Twenty delegates present shall constitute a quorum.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interests of such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until, if possible, every physician in every county of the State has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized, and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and when the

best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

CHAPTER IV.—DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

In order to give him a better opportunity of becoming more fully acquanted with his duties and with the needs of the Association, the President shall be elected one year prior to taking office. During this time he shall be known as President-Elect and shall be ex-officio member of the standing committees, and shall make recommendations at the next annual session.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Vice-Presidents, in their order, shall succeed him.

Sec. 3. The Secretary-Treasurer shall give bond in the sum of One Thousand Dollars. He shall demand and receive all funds due the Association, together with the bequests and donations.

Sec. 4. The Secretary-Treasurer shall attend the general meetings of the Association and the meetings of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members, delegates and accredited visitors at the annual session. He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the JOURNAL. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom and all moneys disbursed, to whom, and for what purpose, with vouchers attached. A fiscal year includes the period of time between the first day of May and the last day of April.

CHAPTER V.—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates. It shall be the business body of the Association and attend to the business of the Association in the interim between meetings.

Sec. 2. Each Councilor shall be organizer and peacemaker for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the conditions of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association. Each Councilor may appoint a Vice-Councilor to assist him in the performance of his duties in his district.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of a component society, on which an appeal is taken from the decision of an individual Councilor, or to which attention has been called by the Councilor or interested members. It shall hear and decide all questions affecting unethical conduct on the part of any members at any annual session, and its

decision in all such matters shall be final when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and the societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the Journal of the Medical Association of Georgia, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the Journal.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary-Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the Journal of the Medical Association of Georgia for publication. The editor, with the consent of the Councilor for the district in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual sessions shall be within the control and direction of the Council.

Sec. 8. In the absence of a Councilor and Vice-Councilor the President is empowered to appoint a representative from the district as acting Councilor, who shall have full rights and power of a Councilor.

Sec. 9. Each Councilor shall render at every session a written report of each county in his district.

Sec. 10. Any member of the Council who fails to attend two regular sucessive sessions of the Council, or whose district does not show evidence of the performance of his duties during the year, unless he renders an acceptable excuse to the Council, is subject to have his position declared vacant by the President and a successor appointed by the President.

CHAPTER VI.—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements.

A Committee on Medical Defense, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of four members, one of whom shall be the Secretary-Treasurer. The other three members shall be appointed for terms of one, two, and three years, respectively. The vacancy which will occur each year by the expiration of the term of one member shall be filled by the President with an appointment for three years. The member who has the shortest time to serve shall be Chairman. The committee shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary, the Commissioner of Health of the State of Georgia, and a sub-committee of three members from each Councilor District appointed by the chairman when needed. It shall represent the Association in securing and enforcing legislation in the interests of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates and their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Committee on Medical Defense shall consist of five members, of whom the Chairman of the Council and the Secretary-Treasurer of the Association shall be members. The other members, one of whom shall act as Chairman of the Committee, shall be elected by the Council for a period of five years. Those elected at this meeting (April 19, 1916), shall serve one, three and five years, respectively.

It shall be the duty of the Committee on Medical Defense to investigate and defend all damage suits against the Medical Association of Georgia; to investigate all claims of civil malpractice made against its members; to take full charge of such cases, which after investigation, they decide to be proper cases for defense; to defend all such cases in the courts of last resort, to furnish General Counsel and pay court cost usual to such litigation, and reasonable fees for local attorneys

as shall be arranged by General Counsel. Provided that any member who has indemnity insurance shall have such insurance bear its portion of the expense. However, they shall not pay, or obligate the Medical Association of Georgia to pay, any judgment rendered against any member upon the final determination of any case. They shall be empowered to contract with such agents or attorneys as they may deem necessary for the proper carrying out of this By-Law.

The assistance for defense, as herein provided, shall be available only to members of the Medical Association of Georgia in good standing. Any member who has not paid his annual dues by April 1st shall not be considered in good standing in the application of this By-Law.

Any member or members of the Association threatened with suit for civil malpractice shall immediately communicate with the Secretary of the Association and shall give full and complete information in reference to all the circumstances alleged in the complaint. The Secretary shall proceed immediately to investigate the circumstances reported and shall advise with the attorneys or agents employed by the Committee for this purpose. The members sued, or threatened with suit, shall be consulted and shall have the complete confidence of the Committee in all transactions connected with the investigation in question. The Committee shall have the authority to require of a constituent society or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the committee so appointed to report to the Committee on Medical Defense and not to the society from which it was appointed.

The Committee on Medical Defense may also, at its discretion, arrange to prosecute illegal practitioners in the State of Georgia and assist in the enforcement of the Medical Practice Act of this State.

CHAPTER VII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Physicians who have been legally registered in other states or who have been licensed by the National Board of Medical Examiners, or who are employed as teachers in the medical schools, or are in the service of the State, a county, a municipality, or the United States Government other than the regular medical corps of the United States Army, the United States Navy and the United States Public Health Service, may be accepted for membership in county medical societies, for membership in this Association, provided they meet the requirements of regular membership. Before a charter is issued to any county medical society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. No matter what the unethical conduct or discipline of the members of the county society may be, both plaintiff and defendant shall have the right to appeal to the Council, whose decision shall be final when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component county society moves to another county in this State, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the county to which he moves. Pending his acceptance or rejection by the society in the county to which he moves, such members shall be considered to be in good standing in the county society from which he was certified and in the Medical Association of Georgia to the end of the period for which his dues have been paid.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be

shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and lists of non-affiliated physicians of the county, to the Secretary of this Association each year, thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment. or make the report required on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the Journal of the Medical Association of Georgia full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

CHARTER VIII.—RULES AND ETHICS

Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Sec. 3. The principles of medical ethics of the American Medical Association shall be those of this Association.

Sec. 4. Any member of this Association, on locating in a new place for practicing his profession, may place his professional card, containing name, address, telephone number, and statement as to whether or not his practice will be limited to any particular class of diseases, in the local paper for a period of not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper, telephone directory, or other public places, shall be considered unethical.

CHAPTER IX—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association after the amendment has lain on the table for one day.

RESOLUTIONS,
MEDICAL ASSOCIATION OF GEORGIA

1921

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper, shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

1922

Be it Resolved, That the House of Delegates recommend that the Committee on Scientific Work make available on the program of the State Association space for two papers from each Councilor district; that a definite time be assigned for reading and discussion of each of these papers, and they be given precedence over all other business. The said papers are to be selected by the Committee on Scientific Work, and, in case a writer does not respond when his name is called, some paper will be substituted and the schedule not deranged. The President ruled that this resolution is only a recommendation and not a law.

1928

Resolved, That the delegates to the A. M. A. elected at this and succeeding meetings of the Medical Association of Georgia be installed January 1st, following their election, and that their term of service run for two years thereafter. And be it further

Resolved, That our delegates be authorized to attend the regular and any called meeting of the House of Delegates of the American Medical Association during the term to which they are elected.

1929

Resolved, That in order to expedite the business of the House of Delegates, all reports of special and regular committees of the Association involving matters of public policy, legislation or appropriation of the funds of the Association be submitted in writing to the Secretary of the Association a sufficient time in advance of the regular annual session, about March 15th, to permit the publication of said recommendations either in the official program prior to the session or in a special circular that shall be mailed to the constituent societies, in order that the delegates may be advised of the proposed changes.

1940

Resolved, That the House of Delegates set the amount of dues at $7.00 per capita for the year 1942.

Treatment with sulfathiazole, a derivative of sulfanilamide, of infants with acute diarrhea and dysentery, hastens the disappearance of the dysentery organisms Shigella paradysenteriae from the stools, Merlin L. Cooper, M.D.; Ralph L. Zucker, M.D., and Stewart Wagoner, M.D., Cincinnati, report in *The Journal of the American Medical Association* for November 1.

They found that 1 of 17 patients treated with sulfathiazole still had a positive stool culture when discharged from the hospital as compared with 17 of 34 patients who were treated by other means.

However, the authors say that sulfathiazole was beneficial in the treatment of the infants only when the dysentery organisms, Shigella paradysenteriae, were demonstrable in the infants' stools. When the stools were negative the drug had no effect.

WOMAN'S AUXILIARY : OFFICERS 1941-42

President—Mrs. Lee Howard, 625 East 44th Street, Savannah.
President-Elect—Mrs. J. Lon King, 223 Buford Place, Macon.
First Vice-President—Mrs. W. A. Selman, 760 Penn Avenue, N. E., Atlanta.
Second Vice-President—Mrs. Fred Rawlings, Sandersville.
Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta.
Third Vice-President—Mrs. J. R. McMichael, Quitman.
Recording Secretary—Mrs. J. C. Metts, 303 Anderson Ave., Savannah.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Treasurer—Mrs. Bruce Schaefer, Toccoa.
Corresponding Secretary—Mrs. Charles Usher, 6 East Liberty Street, Savannah.
Historian—Mrs. Ralph Freeman, Hoschton.



MRS. LEE HOWARD, Savannah
President, 1941-42

AUGUSTA CONVENTION
INVITATION

Dear Auxiliary Members:

The Eighteenth Annual Convention of the Woman's Auxiliary to the Medical Association of Georgia will meet in Augusta April 28-May 1. Let me extend to every Auxiliary member and also to each doctor's wife in Georgia an invitation to attend the convention.

From past experience we know what a cordial welcome awaits us in Augusta and the hospitality that will be extended to us by the members of the Auxiliary to the Richmond County Medical Society.

The convention offers us an opportunity to renew friendships and know each other better, as well as to review this year's progress and to plan for a greater service to the medical profession and to humanity in the coming year.

Please plan to attend the convention.

I am looking forward to seeing you in Augusta.

Sincerely,
MRS. LEE HOWARD, *President*,
Woman's Auxiliary to the
Medical Association of Georgia.

TO MEMBERS OF THE WOMAN'S AUXILIARY:

The members of the Woman's Auxiliary to the Richmond County Medical Society join me in extendng a most cordial invitation to our fellow Auxiliary members to meet with us in historic old Augusta at the annual State Convention, April 28-May 1.

In addition to the Auxiliary members we would be most happy to have the wives of all doctors attending the convention meet with us.

An interesting and entertaining program has been planned and the lovely gardens, for which Augusta is famed, will be at their prettiest at that time.

Come and be with us. You will be assured a hearty welcome.

Sincerely,
MRS. LUCIUS N. TODD, *President*,
Woman's Auxiliary to the
Richmond County Medical Society.

PROGRAM
EIGHTEENTH ANNUAL CONVENTION
WOMAN'S AUXILIARY TO THE
MEDICAL ASSOCIATION OF GEORGIA
Bon Air Hotel, Augusta
April 28-May 1, 1942
EXECUTIVE BOARD
Officers and Committees

President—Mrs. Lee Howard, Savannah
President-Elect—Mrs. J. Lon King, Macon
First Vice-President—Mrs. W. A. Selman, Atlanta
Second Vice-President—Mrs. F. B. Rawlings, Sandersville
Third Vice-President—Mrs. J. R. McMichael, Quitman
Recording Secretary—Mrs. J. C. Metts, Savannah
Corresponding Secretary—Mrs. Charles Usher, Savannah
Treasurer—Mrs. Bruce Schaefer, Toccoa
Historian—Mrs. Ralph Freeman, Hoschton
Parliamentarian—Mrs. J. E. Penland, Waycross

Chairmen of Standing Committees
District Managers
Presidents of County Auxiliaries
Past Presidents of State Auxiliary

Chairmen of Standing Committees

Organization—Mrs. J. Lon King, Macon
Health Education—Mrs. W. A. Selman, Atlanta
Hygeia—Mrs. F. B. Rawlings, Sandersville
Scrapbook—Mrs. J. R. McMichael, Quitman
Public Relations—Mrs. H. M. Kandel, Savannah
Legislation—Mrs. C. C. Harrold, Macon
Press and Publicity—Mrs. J. Harry Rogers, Atlanta
Health Films—Mrs. Leo Smith, Waycross
Doctors' Day—Mrs. Y. Harris Yarbrough, Milledgeville
Research in Romance of Medicine—Mrs. C. L. Ayers, Toccoa
Student Loan Fund—Mrs. L. W. Williams, Savannah
Jane Todd Crawford Memorial—Mrs. W. G. Elliott, Cuthbert
Revisions—Mrs. Ralph H. Chaney, Augusta
Archives—Mrs. J. Bonar White, Atlanta
Exhibits and Awards—Mrs. Charles Mulherin, Augusta
"Mrs. James N. Brawner Trophy"—Mrs. H. G. Banister, Ila

District Managers

First District—Mrs. W. E. Simmons, Metter
Second District—Mrs. Carl S. Pittman, Tifton
Third District—Mrs. Carl P. Savage, Montezuma
Fifth District—Mrs. J. Harry Rogers, Atlanta
Sixth District—Mrs. Harold C. Atkinson, Macon
Seventh District—Mrs. Murl M. Hagood, Marietta
Eighth District—Mrs. W. M. Flanagin, Waycross
Ninth District—Mrs. W. T. Randolph, Winder
Tenth District—Mrs. G. L. Loden, Colbert

Presidents of County Auxiliaries

Baldwin County—Mrs. Richard Binion, Milledgeville
Barrow County—Mrs. C. B. Almand, Winder
Bibb County—Mrs. W. W. Chrisman, Macon
Bleckley-Dodge-Pulaski Counties—Mrs. I. J. Parkerson, Eastman
Bullock-Candler-Evans Counties—Mrs. W. E. Floyd, Statesboro
Burke-Jenkins-Screven Counties—Mrs. L. F. Lanier, Sylvania
Chatham County (Georgia Medical Society Auxiliary)—Mrs. E. N. Gleaton, Savannah
Cherokee-Pickens Counties—Mrs. R. T. Jones, Canton
Clarke-Oglethorpe-Oconee-Madison Counties—Mrs. H. W. Birdsong, Athens
Cobb County—Mrs. W. H. Perkinson, Marietta
Coffee County—Mrs. Roy L. Johnson, Douglas
Colquitt-Brooks Counties—Mrs. A. G. Funderburke, Moultrie
Dougherty County—Mrs. A. S. Bacon, Albany
Emanuel County—Mrs. R. L. Sample, Summit
Fulton County—Mrs. Murdock Equen, Atlanta
Glynn County—Mrs. R. S. Burford, Brunswick
Gordon County—Mrs. J. E. Billings, Calhoun
Gwinnett County—Mrs. W. W. Puett, Norcross
Grady County—Mrs. J. V. Rogers, Cairo
Habersham County—Mrs. C. M. Sharp, Alto
Houston-Peach Counties—Mrs. R. L. Cater, Perry
Jackson County—Mrs. Ralph Freeman, Sr., Hoschton
Lamar County—Mrs. J. H. Jackson, Barnesville
Macon County—Mrs. C. H. Derrick, Oglethorpe
Muscogee County—Mrs. Francis Blackmar, Columbus
Randolph-Terrell Counties—Mrs. W. G. Elliott, Cuthbert
Richmond County—Mrs. Lucius N. Todd, Augusta
Spalding County—Mrs. T. J. Floyd, Griffin
Stephens County—Mrs. C. L. Ayers, Toccoa
Sumter County—Mrs. Russell Thomas, Americus
Tift County—Mrs. C. S. Pittman, Tifton
Ware County—Mrs. B. E. Collins, Waycross
Washington County—Mrs. J. B. Dillard, Davisboro

Conventions and Presidents

Honorary President for Life—Mrs. James N. Brawner, Atlanta
1924—Augusta—(Organization)—Mrs. C. W. Roberts, Atlanta, Temporary Chairman
1925—Atlanta—Mrs. James N. Brawner, Atlanta
1926—Albany—Mrs. William H. Myers, Savannah
1927—Athens—Mrs. C. W. Roberts, Atlanta
1928—Savannah—Mrs. Paul Holliday, Athens (Mrs. J. C. Moore)
1929—Macon—Mrs. C. C. Hinton, Macon
1930—Augusta—Mrs. Marion T. Benson, Atlanta
1931—Atlanta—Mrs. C. C. Harrold, Macon
1932—Savannah—Mrs. Ralston Lattimore, Savannah
1933—Macon—Mrs. S. T. R. Revell, Louisville
1934—Augusta—Mrs. J. Bonar White, Atlanta
1935—Atlanta—Mrs. J. E. Penland, Waycross
1936—Savannah—Mrs. Ernest R. Harris, Winder
1937—Macon—Mrs. William R. Dancy, Savannah
1938—Augusta—Mrs. Ralph H. Chaney, Augusta
1939—Atlanta—Mrs. Warren A. Coleman, Eastman
1940—Savannah—Mrs. Eustace A. Allen, Atlanta
1941—Macon—Mrs. H. G. Banister, Ila

Committees

General Chairmen

Mrs. Lucius N. Todd, Augusta
Mrs. Claude E. Tessier, Augusta

Credentials and Registration

Mrs. Ralph Chaney, Augusta, Chairman
Mrs. A. P. Briggs, Augusta
Mrs. W. J. Williams, Augusta
Mrs. R. E. Butler, Augusta

Arrangements

Mrs. R. C. McGahee, Augusta

Decorations

Mrs. W. W. Battey, Jr., Augusta, Chairman
Mrs. H. G. Mealing, Augusta
Mrs. E. R. Pund, Augusta
Mrs. Peter B. Wright, Augusta

Entertainment

Mrs. Claude M. Burpee, Augusta, Chairman
Mrs. Charles M. Mulherin, Augusta
Mrs. W. F. Hamilton, Augusta
Mrs. W. K. Philpot, Augusta

Luncheon

Mrs. Claude E. Tessier, Augusta, Chairman
Mrs. R. E. Leonard, Augusta

Tea

Mrs. E. S. Sanderson, Augusta, Chairman
Mrs. Harry T. Harper, Augusta
Mrs. R. B. Greenblatt, Augusta
Mrs. J. W. Thurmond, Augusta

Transportation

Mrs. G. Lombard Kelly, Augusta, Chairman
Mrs. Sadie Y. Thompson, Augusta
Mrs. L. P. Holmes, Augusta

Memorial

Mrs. Joseph Akerman, Augusta, Chairman

Exhibits

Mrs. Charles M. Mulherin, Augusta, State Chairman
Mrs. Harry T. Harper, Augusta, Local Chairman

Timekeepers

Mrs. J. P. Hitchcock, Augusta, Chairman
Mrs. R. A. Woodbury, Augusta

Pages

Mrs. W. E. Matthews, Augusta, Chairman

Bulletin Board

Mrs. J. P. Hitchcock, Augusta, Chairman

Publicity

Mrs. J. Harry Rogers, Atlanta, State Chairman
Mrs. E. S. Sanderson, Augusta, Chairman

Hospitality

Mrs. Richard Torpin, Augusta, Chairman
Mrs. Perry P. Volpitto, Augusta
Mrs. Lane Allen, Augusta
Mrs. S. J. Lewis, Augusta
Mrs. J. H. Sherman, Augusta
Mrs. Guy T. Bernard, Augusta
Mrs J. Z. McDaniel, Augusta
Mrs. Robert L. Rhodes, Augusta
Mrs. K. W. Milligan, Augusta
Mrs. L. C. Woods, Augusta
Mrs J. H. Butler, Augusta
Mrs. Thos. B. Phinizy, Augusta
Mrs. W. R. Bedingfield, Augusta

PROGRAM

Headquarters—Bon Air Hotel

TUESDAY, APRIL 28, 1942

Registration

Entertainment and Program

Executive Board Meeting

Tuesday, April 28, 5 P.M., Bon Air Hotel

Luncheon

Wednesday, April 29, 1:30 P.M., Bon Air Hotel

Tea

Wednesday, April 29, 5 P.M., on Grounds of Bon Air Hotel

Presidents' Dinner

Wednesday, April 29, 6:30 P.M., Bon Air Hotel

Public Meeting

Wednesday, April 29, 8 P.M., Medical Association of Georgia, Bon Air Hotel

Garden Tour

Thursday, April 30, 3:30 P. M.

Joint Banquet and Dance

Thursday, April 30, 7:30 P.M., Bon Air Hotel

PROGRAM

WEDNESDAY, APRIL 29, 1942, 9:30 A.M.

Bon Air Hotel

Call to Order by the President, Mrs. Lee Howard, Savannah

Invocation

Rev. Paul A. Turner, Augusta, Pastor, St. John's Methodist Church

Address of Welcome

Mrs. Lucius N. Todd, Augusta, Immediate Past President Woman's Auxiliary to the Richmond County Medical Society

Response to the Address of Welcome

Mrs. W. W. Puett, Norcross

Introduction of Honor Guests, Past Presidents and Officers

Mrs. Ralph H. Chaney, Augusta

ADDRESS

The Auxiliary As an Aid to Organized Medicine in Georgia

Dr. Allen H. Bunce, Atlanta, President, Medical Association of Georgia

ADDRESS

"Keep 'Em Flying"

Mrs. J. U. Reaves, Mobile, Alabama, President, Woman's Auxiliary to the Southern Medical Association

Rules Governing Convention Procedure

Mrs. J. E. Penland, Waycross, Parliamentarian

Reading of Minutes

Introduction of Pages

Report of Executive Committee

Report of Entertainment Committee

Mrs. C. M. Burpee, Augusta

Report of District Managers and County Auxiliary Presidents

Report of Credentials Committee, Mrs. Ralph H. Chaney, Augusta

Appointment of Special Committees

Business

Adjournment

PROGRAM

THURSDAY, APRIL 30, 9:30 A.M.

Bon Air Hotel

Call to Order by the President, Mrs. Lee Howard, Savannah

Invocation

Rev. Hamilton West, Augusta, Rector, St. Paul's Episcopal Church

Address of Welcome

Mrs. Claude E. Tessier, President, Woman's Auxiliary to the Richmond County Medical Society

Response to the Address of Welcome

Mrs. Ralph W. Fowler, Marietta

Reading of Minutes

Report of Advisory Committee to the Woman's Auxiliary
Dr. James N. Brawner, Atlanta, Chairman

ADDRESS

Our Nutritional Needs

Dr. J. A. Redfearn, Albany, President-Elect, Medical Association of Georgia

Memorial Service

Mrs. Joseph Akerman, Augusta

Report of Meeting of Auxiliary to the American Medical Association, Mrs. Allen H. Bunce, Atlanta

Report of Meeting of Auxiliary to the Southern Medical Association, Mrs. Olin S. Cofer, Atlanta

Reports of Chairmen of Standing Committees

Reports of Officers

Report of Auditing Committee

Report of Resolutions Committee

Report of Credentials Committee

Reports of Awards Committees

Report of Courtesy Committee

Business

Report of Nominating Committee

Election of Officers

Installation of Officers

Presentation of Past President's Pin to Retiring President by Mrs. Joseph Yampolsky, Atlanta

Announcements by President

Mrs. J. Lon King, Macon

Adjournment

Thursday, April 30, 2:30 P.M.

Post-Convention Board Meeting

Mrs. J. Lon King, Macon, President

Rules to Govern the Convention

1. To gain recognition, a delegate is requested to rise, address the chair, give her name and Auxiliary.
2. No delegate shall speak more than twice on the same subject, and is limited to two minutes each time.
3. Reports shall not be read from Auxiliaries which are not represented by delegates but shall be filed with the Secretary.
4. All original motions or resolutions shall be made by submitting two copies, one to the Resolutions Committee and one to the Recording Secretary.
5. Reports of delegates and district managers are limited to two minutes.
6. No one is entitled to vote before she is registered. Whispering conversations greatly retard the business of a meeting.

Please Be Prompt. Meetings will begin promptly at the time stated in the program. In order to expedite the business of the convention reports must conform to the time allotted.

CHICAGO SELECTED FOR 1942 CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

Because of the war, the thirty-second annual Clinical Congress of the American College of Surgeons will be held in Chicago October 19 to 23, instead of in Los Angeles as originally planned. Headquarters will be at the Stevens Hotel. The twenty-fifth annual Hospital Standardization Conference sponsored by the College will be held simultaneously. The programs of both meetings will be based chiefly on wartime activities as they affect surgeons and hospital personnel in military and civilian service.

BOOK REVIEW

A Primer on *The Prevention of Deformity in Childhood*, by Richard Beverly Raney, B.A., M.D., in collaboration with Alfred Rives Shands, Jr., B.A., M.D.

The contents of this book more than fulfill its title. It is a primer in the sense that it is brief and to the point. While it stresses prevention, it also gives in brief most of the accepted methods of treatment. Its preparation was authorized in 1937 by the Professional Advisory Committee of the National Society for Crippled Children. It was prepared by Dr. R. B. Raney of the Duke University School of Medicine, in collaboration with Dr. A. R. Shands, Jr., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation, and was published in 1941 by the National Society of Crippled Children, Elyria, Ohio.

It was not written as a reference book for the orthopedist, or as a textbook for medical students or nurses. As stated in the preface, this primer was written plainly and simply for those who make it possible for the orthopedic surgeon to carry on his work in preventing and correcting deformities.

Today, with increased social consciousness of public health problems, there are many lay workers interested in preventing and correcting the deformities of childhood. Medical social workers, nurses, teachers of crippled children, parents of crippled children, members of boards of hospitals for crippled children, members of county, state, or national societies for the crippled, and even physicians in general practice, will find this book easy to read and understand, and very practical. It is profusely illustrated by eighty-eight drawings by Mr. Jack Wilson, which emphasizes the point to be portrayed better for the lay reader than photographs or x-rays could do.

This book of more than two hundred pages covers the subject completely, and stresses both prevention and treatment. It is strongly recommended to all who are interested in the betterment of the physically handicapped. Price $1.00. J. Hiram Kite, M.D.

Diet in Sinus Infections and Colds, by Egon V. Ullman, M.D. Second edition, 185 pages.

This is a most enjoyable book. Written for the layman as well as the physician, it embodies a knowledge of sinus disease, a knowledge of the average person's diet, and is not at all lacking in humor. No attempt is made by the author to show that sinus trouble is easily cured by diet alone, or by any means. He mentions the other important factors such as allergic rhinitis and purulent sinusitis which must have separate or additional treatment. Operative interference is minimized.

The book opens with definition and explanation of the sinuses and sinusitis; then the reasons for sinusitis; next, the story of the various foods and their dietary importance. Finally, it gives menus, together with such practical information as "how long to carry on the diet" and "the management of the patient." There are, of course, parts with which the reading physician will not agree, but there is much sound, common sense. The price is $2.00. You will be glad you have read it.

Lester A. Brown, M.D.

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1941

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R. N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

RECRUITMENT OF STUDENT NURSES

CARRIE M. SPURGEON, R.N.
Atlanta
Educational Supervisor, Board of Examiners of Nurses for Georgia

How is the Georgia State Nurses' Association meeting the responsiblity of recruiting student nurses?

The Federal Government has called for an additional 50,000 student nurses this year. This need was stated in the summer months of 1941. We are glad to announce how Georgia is fulfilling its obligation by assisting with the production of more nurses.

At the annual meeting of the Georgia State Nurses' Association held in Gainesville, Georgia, on Oct. 27, 28 and 29, 1941, a State Nursing Council on National Defense was organized. The Council adopted as one of its major functions the recruitment of students for the accredited schools of nursing of the State. In accomplishing this objective it was felt that efforts should be directed toward expansion of the schools already well established rather than encouraging the opening of new schools which might have difficulty in operatng sound courses of study. A working plan was immediately developed.

In cooperation with the Public Information Committee, a state-wide program of disseminating information to high schools and colleges was put into operation. Speakers' clubs were organized in the eleven district nurses' associations in the state and folders of information for distribution prepared. Discussion groups met to determine sound policies. At the present time, speakers' bureaus with a vision of continued usefulness are operating in all districts and outlines of uniform material were developed within the districts in accord with guidance from the American Nurses' Association.

The Public Information Committee has also guided authentic publicity relative to recruitment through newspapers, radio and professional magazines. By the middle of December over 500 potential students, upon their request, had been given information. The seventeen accredited schools of nursing of Georgia offer the young woman an opportunity for patriotic service, satisfaction in work and economic security. Within the last few years clinical facilities have expanded, new educational equipment has been added, living conditions for students have been improved, and faculties have seen the need for additional preparation, an added knowledge of more efficient methods. Courses have been pursued which were designed to help one do better the job she is doing.

Within recent years the hospitals have grown somewhat dependent upon graduate staff nurses to care for the patients. These nurses who are called to serve with the armed forces may be replaced with the increase in student personnel. More responsibility will be placed upon a younger and less prepared group. This fact brings to mind the urgent need of discrimination in selection of students. More than ever is it important to determine such factors as physical stamina, emotional stability, maturity, intelligence, and suitability to nursing before an individual is admitted to the school of nursing.

It is believed that with the contemplated increase in student enrollments the nursing needs of Georgia and also war service needs can be met. Figures show that even with the decrease in the number of schools of nursing in the state the size of the student group remains relatively the same. In 1931 there were 42 schools of nursing and 1,250 students enrolled. Today, March, 1942, there are 17 schools and 1,289 students enrolled. The fields of nursing have broadened within the last ten years and more nurses are needed for both home and foreign service. This can be accomplished by strengthening our present resources.

The Federal Government is making a second appropriation to schools of nursing offering the basic course. Funds may be used for scholarships, subsistence, textbooks, laboratory and class room facilities, and to employ additional instructors. Federal aid is available to those schools which can show a soundly established program and a potential increase in the student

body. Two Georgia schools were approved for the first appropriation, and others will undoubtedly come in for their share at this time.

The Georgia State Nurses' Association looks at the entire picture and continues to direct its activities to better nursing service and welfare of the people of the State. It is believed that continued efforts will show an adequate, efficient, and well balanced plan of nursing for Georgia and the country.

NEWS ITEMS

Dr. J. D. Peacock, Wadley, has been elected mayor of Wadley and president of the Bank of Wadley.

Dr. D. B. Fillingim, Savannah, spoke on *The History of Medicine and Reasons for and Against the Selection of It as a Life's Work* before a meeting of the Savannah Chapter of the American Business Clubs on February 4.

Dr. E. D. Colvin, Atlanta, was appointed chairman of the Georgia Executive Committee of the South Atlantic Association of Obstetricians and Gynecologists on February 6.

The New York Polyclinic Medical School and Hospital, New York City, honors 23 of its doctors by unveiling a gallery of portraits of physicians and surgeons notable in the history of the institution on February 10. Their portraits were unveiled in the faculty room, 341 West Fiftieth Street. Several hundred staff members, nurses, visiting physicians and other friends of the hospital attended the ceremony or viewed the gallery during the afternoon. A reception and tea followed the unveiling.

The Tift County Medical Society held its regular monthly meeting at the Woman's Club, Tifton, on February 4. Visitors present were: Dr. B. H. Minchew, Waycross; Dr. C. K. Wall and Dr. Roy A. Hill, Thomasville. The visitors spoke on *County Medical Organizations and Hospital Staff Meetings.*

The Fulton County Medical Society held its regular meeting on February 16. Dr. Joseph Yampolsky reported a case of *Syphilitic Aortitis in a Nine-Year-Old Child;* discussed by Dr. R. Hugh Wood and Dr. L. Minor Blackford. Dr. Calvin Sandison reported a case, *Internal Fixation of Fractures.* Titles of cases reported at its meeting on February 2 were: *Congenital Syphilis,* by Dr. M. Hines Roberts; discussed by Dr. J. R. McCord and Dr. C. B. Upshaw. *Tuberculosis: Model* 1942 by Dr. Champ H. Holmes; discussed by Dr. Robert C. Major and Dr. A. Worth Hobby

The Georgia Medical Society, Savannah, gave its annual President's Dinner February 10 at the Savannah Hotel.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on February 12.

The annual banquet of the medical and surgical staff of the Georgia Baptist Hospital was held on January 10.

The Bibb County Medical Society met at the Cochran Field Hospital, Macon, February 17. Major John A. Egan gave a lecture on *Medical Education of the Soldier—Illustrated.*

The Staff meeting of the Georgia Baptist Hospital, Atlanta, was held on February 17. Dr. Major Fowler presented a *Urologic Patient with Postoperative Complications.*

The Association of Medical Assistants held its second annual banquet at Al Remler's Club Riyale, Savannah, January 21.

The Atlanta Clinical Society sponsored two lectures given at the Academy of Medicine, Atlanta, March 5-6 by Dr. J. B. Youmans, associate professor of medicine, Vanderbilt University, Nashville, Tenn., on *The Nutrition of Populations with Particular Reference to War Time Conditions;* Captain C. S. Stevenson, M. C., U. S. N., on *Medical Military Observations in England.* Captain Stevenson was sent to London to study the problems of the effect of bombing on the civilian population as well as other medical conditions during war. Officers of the Society are: Dr. Carter Smith, president; Dr. J. D. Martin, vice-president; Dr. Philip H. Nippert, secretary-treasurer. Past Presidents of the Society have been: Dr. Lila M. Bonner, Dr. Herbert S. Alden, Dr. Lewis M. Smith, Dr. Joseph C. Massee, Dr. Mark S. Dougherty, Dr. L. Minor Blackford, Dr. Roy R. Kracke, Dr. D. Henry Poer, Dr. Vernon E. Powell, Dr. William H. Kiser, Dr. William A. Smith, and Dr. George Eubanks

The Georgia Medical Society, Savannah, met on February 24. The program consisted of a symposium on *War Wounds, Penetrating Wounds of the Chest and Abdomen* by Dr. J. K. Quattlebaum; discussed by Dr. R. L. Neville and Dr. Oscar H. Lott. Report of case, *Traumatic Rupture of the Kidney* by Dr. Walter Norton.

The Tenth District Medical Society met in the nurses' class room in the University Hospital, Augusta, February 12. Dr. Richard Torpin, of the University of Georgia School of Medicine, Augusta, conducted *Gynecologic Demonstrations;* Dr. J. H. Sherman conducted *Surgical Demonstrations;* Dr. P. B. Wright conducted *Orthopedic Demonstrations;* Dr. Harry Harper, *Medicine.*

Dr. J. L. Campbell, Atlanta, spoke before a meeting of the LaGrange Rotary Club on February 11 on *Cancer and Its Prevention and Cure.*

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, March 2. Dr. Alexander Randall, professor of Urology of the University of Pennsylvania School of Medicine, Philadelphia, spoke on *The Origin and Growth of Renal Calculus.*

The Muscogee County Medical Society met at the Ralston Hotel, Columbus, February 24. Dr. James Garber, Birmingham, Ala., spoke on *Medical Problems in Obstetrical Patients.*

The Bibb County Medical Society met at Baconsfield Club House, Macon, March 3. Dr. C. M. Sharp, Alto, read a paper entitled *Medical Aspects of Tuberculosis.*

THE staff meeting of Emory University Hospital was held on March 3. Dr. Lon Grove reported a case, *Tumor of Ileum;* Dr. Ira Ferguson, case report, *Chronic Pancreatitis.*

THE WARE COUNTY MEDICAL SOCIETY met at the Phoenix Hotel, Waycross, January 7. Dr. H. W. Muecke and Dr. T. F. Ferrell were hosts at dinner. Members were invited to discuss interesting cases.

THE BIBB COUNTY MEDICAL SOCIETY met in Ridley Hall, Macon, January 6. *What Does the Government Expect of the Medical Profession in This Crisis?* was discussed by Dr. Stubbs of the Fourth Corps Area of the U. S. Army.

THE staff of the Crawford W. Long Memorial Hospital, Atlanta, met on January 8. Dr. L. P. Baker spoke on *Mortality;* Dr. Kells Boland reported a case, *Unusual Tumor of the Colon;* discussion was led by Dr. Frank K. Boland.

THE Twenty-Second Annual Meeting of the Surgical Association of the Atlanta and West Point Rail Road Company, The Western Railway of Alabama and the Georgia Railroad will be held at the Biltmore Hotel, Atlanta, March 26. Titles of addresses and papers on the program are: *The Traumatic Abdomen* by Dr. H. L. Cheves, Union Point; *Injuries of the External Eye and Uses of the Sulfonomides in Their Treatment*, Dr. Lewis S. Patton, Athens; *Concussion of the Brain*, Dr. C. N. Wasden, Macon; *Dermatoses in Railroad Workers*, Dr. Howard Hailey, Atlanta; *Genito-Urinary Tract*, Dr. W. H. Clark, LaGrange; *Round Table Discussion*, conducted by Dr. J. R. Garner, Atlanta, chief surgeon; *Discussion of Papers Presented* and *Subjects Introduced* by guests and members. Luncheon will be served at 2:00 P.M. The afternoon session will include the *President's Address*, Dr. Floyd W. McRae, Atlanta; guest speaker, Major Dwight M. Kuhns, M. C., U. S. Army, commanding officer, Fourth Corps Area Laboratories, Fort McPherson.

THE FOURTH DISTRICT MEDICAL SOCIETY met at the Griffin Hotel, Griffin, March 11. Titles of scientific papers on the program were: *Cancer of the Breast* by Dr. J. E. Scarborough, Atlanta; *Ovarian Hemorrhage*, Dr. T. J. Floyd, Griffin; *Functional Disorders of the Circulation, Their Diagnosis and Management*, Dr. Carter Smith, Atlanta; *Skin Diseases Resulting from External Irritation*, Dr. Herbert Alden, Atlanta; *Pyrolospasm—19 Cases*, Dr. J. T. Leslie, Griffin. Other speakers on the program were: Dr. Allen H. Bunce, Atlanta, president of the Medical Association of Georgia; Dr. J. A. Redfearn, Albany, president-elect of the Medical Association of Georgia; and Dr. Edgar D. Shanks, Atlanta, secretary-treasurer of the Medical Association of Georgia. Officers of the Society are: President, Dr. T. I. Hawkins, Griffin; Vice-President, Dr. Frank Amis, Hogansville; Secretary-Treasurer, Dr. M. M. Head.

THE NINTH DISTRICT MEDICAL SOCIETY met at the Woman's Club at Toccoa March 18. Dr. Allen H. Bunce, Atlanta, president of the Medical Association of Georgia, read the first paper, which was discussed by Dr. C. L. Ayers of Toccoa; *Report of the Hospital Committee* by Dr. D. Henry Poer, Atlanta; paper entitled *Surgical Shock* by Dr. Bruce Schaefer, Toccoa, discussed by Dr. C. D. Whelchel, Gainesville. Luncheon was served at the Albemarle Hotel.

THE ATLANTA SOCIETY OF X-RAY TECHNICIANS was organized recently. Officers elected were: Wayne Smith, R.T., president; Alma Greenway, R.T., vice-president; Virginia Fowler, R.T., secretary-treasurer. Personnel of the Executive Committee are Dora Ewing, John Penland and Mrs. Kermit Warren. The address of the secretary-treasurer is 139 Forrest Avenue, N.E., Atlanta.

DR. MURDOCK EQUEN, DR. FRANK NEUFFER and DR. WILLIAM MATTHEWS announce the association with them of DR. ALSTON CALLAHAN in the diagnosis and treatment of the eyes. The Ponce de Leon Eye and Ear Infirmary is located at 144 Ponce de Leon Avenue, N. E., Atlanta.

THE SOUTHEASTERN SURGICAL CONGRESS held its thirteenth annual session at the Biltmore Hotel, Atlanta, March 9, 10, 11. Among the doctors to welcome its members and guests were Dr. Major Fowler, Atlanta, president of the Fulton County Medical Society, and Dr. Allen H. Bunce, Atlanta, president of the Medical Association of Georgia. Dr. B. T. Beasley, Atlanta, is secretary-treasurer of the Congress, and Dr. Dan Y. Sage was chairman of the Program Committee. Dr. T. C. Davison, Atlanta, served as general chairman of all the committees. Dr. B. T. Beasley was chairman of exhibits; Dr. Olin S. Cofer, chairman of Clinic Committee; Dr. Frank K. Boland, Entertainment Committee; Dr. Marion C. Pruitt, Hotel Committee; Dr. C. W. Roberts, Publicity Committee; Dr. W. Perrin Nicolson, Reception Committee; Dr. Geo. W. Fuller, Transportation Committee. Chairman and Co-Chairman of the Entertainment Committee of the physicians' wives were Mrs. Murdock Equen and Mrs. Olin S. Cofer, respectively. Georgia physicians on the scientific program and titles of addresses were Dr. Cleveland D. Whelchel, Gainesville, *Thoracoplasty for Pulmonary Tuberculosis;* Dr. Enoch Callaway, LaGrange, *Cancer of the Breast—Illustrated.*

THE BIBB COUNTY MEDICAL SOCIETY met at the Baconsfield Club House, Macon, March 17. Dr. C. D. Whelchel, Gainesville, was a guest speaker and spoke on *Surgical Aspects of Tuberculosis.*

DR. ROY L. JOHNSON, formerly of Douglas, who served for one year in the U. S. Army and after he received an honorable discharge, has again located in Douglas and will do general practice.

DR. F. B. BROWN, Savannah, spoke on *Fractures* before a meeting of the Ware County Medical Society, March 4.

DR. JULIAN K. QUATTLEBAUM, Savannah, has been elected president of the University of Georgia Alumni Society.

DR. J. T. MCCALL, SR., Rome, has been elected president of the Rome Rotary Club.

DR. F. M. MULLINO, Montezuma, celebrated his fiftieth anniversary of his beginning to practice medicine.

COUNTIES REPORTING FOR 1942

Montgomery County Medical Society

The Montgomery County Medical Society announces the following officers for 1942:

President—W. M. Moses, Uvalda
Vice-President—J. E. Hunt, Mt. Vernon
Secretary-Treasurer—J. W. Palmer, Ailey
Delegate—H. C. Sharpe, Alston

Jasper County Medical Society

The Jasper County Medical Society announces the following officers for 1942:

President—F. S. Belcher, Monticello
Vice-President—E. M. Lancaster, Shady Dale
Secretary-Treasurer—E. M. Lancaster, Shady Dale
Delegate—L. Y. Pittard, Monticello

Chattooga County Medical Society

The Chattooga County Medical Society announces the following officers for 1942:

President—R. E. Talley, Trion
Vice-President—Brice Harris, Trion
Secretary-Treasurer—F. H. Killam, Trion

Gordon County Medical Society

The Gordon County Medical Society announces the following officers for 1942:

President—M. A. Cree, Calhoun
Vice-President—J. E. Billings, Calhoun
Secretary-Treasurer—R. D. Walter, Calhoun
Delegate—W. D. Hall, Trion
Alternate Delegate—W. R. Barnett, Calhoun

Burke County Medical Society

The Burke County Medical Society announces the following officers for 1942:

President—H. F. Bent, Midville
Vice-President—W. C. McCarver, Vidette
Secretary-Treasurer—W. D. Lundquist, Waynesboro
Delegate—J. M. Byne, Jr., Waynesboro
Alternate Delegate—W. R. Lowe, Midville

Laurens County Medical Society

The Laurens County Medical Society announces the following officers for 1942:

President—C. G. Moye, Brewton
Vice-President—Chas. L. Hicks, Dublin
Secretary-Treasurer—O. H. Cheek, Dublin
Delegate—E. B. Claxton, Dublin

Tift County Medical Society

The Tift County Medical Society announces the following officers for 1942:

President—Robert E. Jones, Tifton
Vice-President—E. L. Evans, Tifton
Secretary-Treasurer—A. G. LeRoy, Tifton
Delegate—C. S. Pittman, Tifton
Alternate Delegate—M. F. Shaw, Omega

Brooks County Medical Society

The Brooks County Medical Society announces the following officers for 1942:

President—A. B. Jones, Quitman
Vice-President—L. A. Smith, Quitman
Secretary-Treasurer—Harry A. Wasden, Quitman
Delegate—Harry A. Wasden, Quitman
Alternate Delegate—L. A. Smith, Quitman

Ocmulgee Medical Society

(Bleckley, Dodge, Pulaski Counties)

The Ocmulgee Medical Society announces the following officers for 1942:

President—J. L. Thompson, Eastman
Vice-President—J. M. Smith, Cochran
Secretary-Treasurer—I. J. Parkerson, Eastman
Delegate—H. W. Long, Eastman
Alternate Delegate—W. A. Coleman, Eastman

Colquitt County Medical Society

The Colquitt County Medical Society announces the following officers for 1942:

President—C. N. Brannen, Moultrie
Vice-President—W. R. McGinty, Moultrie
Secretary-Treasurer—R. E. Stegall, Moultrie
Delegate—J. B. Woodall, Moultrie
Alternate Delegate—C. C. Brannen, Moultrie

Sumter County Medical Society

The Sumter County Medical Society announces the following officers for 1942:

President—J. C. Logan, Plains
Vice-President—Schley Gatewood, Americus
Secretary-Treasurer—R. H. Enzor, Smithville

Bibb County Medical Society

The Bibb County Medical Society announces the following officers for 1942:

President—H. G. Weaver, Macon
President-elect—Alvin E. Siegel, Macon
Vice-President—L. D. Porch, Macon
Secretary-Treasurer—A. M. Phillips, Macon
Delegate—C. L. Ridley, Macon
Delegate—J. B. Kay, Byron

Jefferson County Medical Society

The Jefferson County Medical Society announces the following officers for 1942:

President—S. T. R. Revell, Louisville
Vice-President—V. L. Bryant, Bartow
Secretary-Treasurer—John R. Lewis, Louisville

Crisp County Medical Society

The Crisp County Medical Society announces the following officers for 1942:

President—Chas. Adams, Cordele
Vice-President—H. J. Williams, Cordele
Secretary-Treasurer—L. O. Wootten, Cordele
Delegate—P. L. Williams, Cordele
Alternate Delegate—L. O. Wootten, Cordele

Grady County Medical Society

The Grady County Medical Society announces the following officers for 1942:

President—A. B. Reynolds, Cairo
Vice-President—J. B. Warnell, Cairo
Secretary-Treasurer—J. V. Rogers, Cairo
Delegate—J. V. Rogers, Cairo

Decatur-Seminole Counties Medical Society

The Decatur-Seminole Counties Medical Society an-

nounces the following officers for 1942:

President—W. L. Wilkinson, Bainbridge
Vice-President—W. E. Whittle, Iron City
Secretary-Treasurer—M. A. Ehrlich, Bainbridge
Delegate—R. F. Wheat, Bainbridge
Alternate Delegate—L. W. Willis, Bainbridge

Habersham Medical Society

The Habersham County Medical Society announces the following officers for 1942:

President—Fred Crenshaw, Alto
Vice-President—D. H. Garrison, Clarkesville
Secretary-Treasurer—T. H. Brabson, Cornelia
Delegate—D. H. Garrison, Clarkesville
Alternate Delegate—C. M. Sharp, Alto

Georgia Medical Society
(Chatham County)

The Georgia Medical Society announces the following officers for 1942:

President—E. Nesbert Gleaton, Savannah
Vice-President—G. L. Touchton, Savannah
Secretary-Treasurer—S. Elliott Wilson, Savannah
Delegate—C. F. Holton, Savannah
Delegate—H. J. Morrison, Savannah

Upson County Medical Society

The Upson County Medical Society announces the following officers for 1942:

President—B. C. Adams, Thomaston
Vice-President—J. M. Kellum, Silvertown
Secretary-Treasurer—Jno. D. Blackburn, Thomaston
Delegate—R. L. Carter, Thomaston
Alternate Delegate—J. E. Garner, Thomaston

OBITUARY

Dr. Stephen David Smith, Byron; College of Physicians and Surgeons, Baltimore, Maryland, 1882; aged 85; died on January 3, 1942, in a Macon hospital. He was born and reared in Houston county. Graduated from Mercer University, Macon, in 1878. After he graduated in medicine, he took post-graduate study, then began the practice of medicine near Centerville and practiced medicine in and adjacent to his home community for sixty years. Dr. Smith was a descendent of one of the highly respected and loved pioneer families of Houston county. He was a member of the Hattie Baptist church, which he built. Surviving him are three sons, Dr. Geo. B. Smith, Rome; Melville A. Smith, Orlando, Florida; Armin H. Smith, Tampa, Florida; one daughter, Mrs. Proctor Hull Page, Burlington, Vermont. Dr. J. E. Sammons, Elder A. J. Banks and Rev. E. M. Clapp officiated at the funeral services in Hart's mortuary. Burial was in Rose Hill cemetery.

Dr. Thomas A. Powell, Wrightsville; University of Georgia School of Medicine, Augusta, 1900; aged 77; died on January 8, 1942, at the home of his daughter, Mrs. Roy D. Powell. He practiced medicine in Johnson and adjoining counties and was held in high esteem by hundreds of friends. He was a member of Powell's Chapel Methodist church. Surviving him are four daughters, Mrs. Addie May Schwalls, Swainsboro; Misses Effie B. Powell and Sara Powell, Bartow; Miss Anda Powell, Kite; two sons, Otto Powell, Augusta, and Eugene M. Powell, Kite. Rev. R. E. Llorens and Elder Sidney Claxton officiated at the funeral services, conducted at Oaky Grove church. Burial was in the churchyard.

Dr. John W. Martin, Macon; member; Atlanta College of Physicians and Surgeons, Atlanta, 1904; aged 71; died on December 17, 1941. He was born at Wrightsville. Dr. Martin practiced in Macon for 30 years. He was a good citizen and had many friends.

Dr. Eli Franklin Sapp, Albany; member; Atlanta School of Medicine, Atlanta, 1911; aged 61; died on February 11, 1942. He was a native of Mitchell county. After he graduated in medicine he served as intern in a Brooklyn hospital, took post-graduate study at the Mayo Clinic in Rochester, Minn., New York City and in New Orleans. Dr. Sapp was a prominent physician and practiced in Albany and surrounding community for 28 years. He was a member of the Dougherty County Medical Society, American Medical Association, F. & A. M., Shrine and Methodist church. Surviving him are his widow, two daughters, Mrs. E. H. Kline and Mrs. Sam Meeks, Albany; two sons, E. C. and E. F. Sapp, Jr., both of Albany. Rev. J. Ed Fain conducted the funeral services at the First Methodist church. Interment was in Crown Hill cemetery.

Dr. Isaac H. Lane, LaGrange; member; Emory University School of Medicine, Atlanta, 1891; aged 76; died on February 25, 1942. He was a native of Heard county. His father was a practicing physician there for many years. Dr. Lane practiced medicine in Heard county for 10 years, then moved to LaGrange where he practiced until disabled. He was a prominent citizen, successful practitioner and an active member of the First Methodist church. Surviving him are one son, Dr. Joseph E. Lane, LaGrange; two daughters, Mrs. Clyde Lane Ridley, Miami Beach, and Mrs. Grace Lane Burton, LaGrange. Rev. M. M. Maxwell and Rev. A. E. Dallis officiated at the funeral services, conducted at the First Methodist church. Burial was in Hill View cemetery.

Dr. George E. Chapman, Danville; Louisville Medical College, Louisville, Ky., 1886; aged 77; died on February 9, 1942, in a Macon hospital after an illness of several months' duration. He had practiced medicine at Danville and surrounding community for more than fifty years. Surviving him are his widow, five daughters and one son.

Dr. Eli James McDaniel, Lilburn; Georgia College of Eclectic Medicine and Surgery, 1913; aged 67; died on February 16, 1942. He was a prominent citizen and a member of the Baptist church. Surviving him are his widow, two daughters, Miss Ruth Ann McDaniel, Fayetteville, N. C., and Mrs. D. L. Crossing, Shreveport, La.; two sons, J. T. and Eli J. McDaniel, Lilburn. Rev. C. C. Singleton and Rev. T. W. Jones officiated

at the funeral services conducted at the Liberty Baptist church. Burial was in Lilburn cemetery.

IN MEMORIAM

Charles Van Wood, M.D.

Charles Van Wood, eldest son of Ella Vann and W. E. Wood, was born in Cedartown Oct. 6, 1875. He was descended from distinguished Southern ancestry, many of whom rendered service in the Revolution, Mexican War, and War Between the States.

He received his early education in the public and private schools in Cedartown, and later was graduated from the Medical Department of the University of Tennessee, now the Medical College of Vanderbilt University, with highest honors of his class in 1897. He served one year as intern in the Nashville City Hospital, and began the practice of medicine in Cedartown in 1898.

On Jan. 10, 1900, he was married to Miss Corrie Houseal, a member of one of Polk County's oldest and most prominent families. (Mrs. A. W. Roberts, of Orlando, Florida, is the only child of this union, and Frances Wood Roberts his only grandchild).

He had a great love for his chosen profession and, throughout the forty-three years of active practice in Cedartown, kept fully abreast of new developments in medical science, pioneering in the use of antitoxin and microscopic work. His capacity for friendship endeared him to many who not only honored him as a physician but also loved him as a true and loyal friend.

He held many official positions, both in the community and in medical services. As a doctor, he served as City Physician and County Physician; was an officer of the Polk County Medical Society and of the Seventh District Medical Society; and Surgeon of the Seaboard Air Line Railway for many years. In the present emergency he was appointed medical examiner of the local board of selectees and served in this capacity until he was forced to resign on account of ill health.

His first office in Cedartown was chief of the old Volunteer Fire Department in 1899. He was elected to the City Council for several terms, and lately to the City Commission; was the president of the Cherokee Golf Club; president of Kiwanis Club; member of the Democratic Executive Committee, Commander of the Joseph S. Brewster Post No. 86 American Legion.

He was a member of the Masonic Order, Shriner of Yaarah Temple, and Woodmen of the World. A lifelong member of the First Methodist Church, he served on the board of stewards for twenty years.

At the declaration of war in 1917 he immediately offered his services to his country and entered the Medical Corps of the United States Army with the rank of Major, in 1918. When the Armistice was signed, he was commanding officer of the Medical Corps at Camp Wadsworth, Spartanburg, S. C., under orders for embarkation for France.

After his return home, in cooperation with the late Dr. H. M. Hall and Dr. P. O. Chaudron, a site was secured and plans made for a modern hospital, adequate for the needs of Cedartown and Polk County. Because of the depression and other obstacles, the project was reluctantly abandoned, though his hope for its completion was never relinquished. When lately the idea for a hospital was revived, he gave freely of his interest and advice, despite his inability to take an active part in its promotion, and were he still present, he would have no greater joy than the fulfillment of this long cherished dream.

Polk County Medical Society.

CHILD HEALTH DAY—1942

By the President of the United States of America

A Proclamation

WHEREAS the Congress by joint resolution of May 18, 1928 (45 Stat. 617), has authorized and requested the President of the United States to issue annually a proclamation setting apart May 1 as Child Health Day:

NOW, THEREFORE, I, FRANKLIN D. ROOSEVELT, President of the United States of America, in recognition of the vital importance of the health of children to the strength of the Nation, do hereby designate the first day of May of this year as Child Health Day.

And I call upon the people in each of our communities to contribute to the conservation of child health and the reduction of illness among children by exerting every effort to the end that before May Day, Child Health Day, children over nine months of age be immunized against diphtheria and smallpox, the two diseases for which we have the surest means of prevention.

IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States of America to be affixed.

DONE at the City of Washington this 6th day of February in the year of our Lord nineteen hundred and forty-two and of the Independence of the United States of America the one hundred and sixty-sixth.

By the President:

Franklin D. Roosevelt.

Cordell Hull,
Secretary of State.

DEFENSE BONDS AND STAMPS

America is waging an all-out fight for Victory. We know that only a unified Nation, fighting on every front, can carry this mighty effort to success. This means that every American must do his part.

Professionally, we are willing and eager to face our responsibilities. But we must do more than this. We must postpone many of the satisfactions of usual needs and wants to help the Nation win. We will pay increased taxes it is true, but even this is not enough. We must supplement the Nation's usual revenues by lending our money to the Government through the purchase of Defense Savings Bonds and Stamps.

We can buy bonds as an individual, family or association investment, but buy them we must. The money not only pays for the Nation's planes, tanks, and guns, but these dollars are subtracted from consumers' purchasing power which helps to curb inflation. And for the individual or association purchaser, the bonds represent reserves of cash which build toward future security.

Three series of Defense Bonds are being offered, known as E, F and G. Each is designed to meet special needs of purchasers.

The Series E Bonds are the "People's Bonds." These may be bought only by individuals, and can be obtained at any post office and almost any bank. The People's Bonds are appreciation bonds which cost 75 per cent of their face value and the Government pays back the full face value amounts at the end of ten years. The smallest Series E Bond costs $18.75 and pays $25 at maturity; the largest costs $750 and pays $1,000. The 33 1/3 increase is equivalent to an annual return of 2.9 per cent, compounded semiannually. The bonds may be registered in the names of one or two persons or in the name of one person with a second listed as beneficiary. To protect the buyer of a bond, it is made so that he cannot sell it or use it as security for a loan, but he may redeem it any time after 60 days from the date of issue.

To buy a Series E bond on the installment plan, one can purchase Defense Savings Stamps. Stamps can be purchased for as little as 10 cents and when $18.75 has been invested in them, they can be turned in for one of the registered interest-bearing bonds.

The F and G Bonds are largely for associations, corporations, and other large investors. The Bonds of Series F are purchased for 74 per cent of their face value, and at the end of the 12-year maturity period provide a return equivalent to an annual interest rate of 2.53 per cent, compounded semiannually. The new small denomination Series F bond of $25 costs $18.50; the largest bond of this series is the $10,000 Bond which costs $7,400.

Series G Bonds are intended for those who wish to receive a current income from their investment. Their cost is the same as their face value, and they are issued in denominations from $100 to $10,000. These bonds mature 12 years from the date of issue, and interest is payable semiannually at the rate of 2½ per cent. Although bonds of Series F and G are issued only by Federal Reserve Banks and the Treasury Department, commercial banks generally will handle applications for them.

Millions of Americans are buying Defense Bonds and Stamps. But, for final Victory, each of us must buy, and keep on buying to the limit of our resources.

GRANTS TO THE UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE AUGUSTA

Two grants for investigation in two of the departments of the University of Georgia School of Medicine have just been announced. One was a grant in aid of $4,350.00 for continuation of researches in the newer venereal diseases under the direction of Dr. Robert B. Greenblatt, head of the Department of Experimental Medicine. The other award of $2,000.00, from a donor to be unnamed for the present, was for the continuation of researches in nutrition by Dr. V. P. Sydenstricker, Professor of Medicine, and his staff.

Recent speakers before the faculty and student body of the School of Medicine were Dr. J. Dellinger Barney of Boston, who spoke on "A Consideration of Some of the Problems of Renal Stones," and Dr. L. Clarence Cohn of Baltimore, whose subject was "Carcinoma of the Female Breast."

To succeed Dr. R. Frank Slaughter as full-time head of the Department of Neurologic Surgery, Dr. Wilford Arless Risteen, of Rochester, New York, has been elected. Dr. Risteen took over his duties March 1, 1942.

The former Wilhenford Hospital for Women and Children has been converted into a Tuberculosis Hospital and was occupied on February 1. The capacity of the hospital will be sixty beds. It is in charge of Dr. Lucius N. Todd, Professor of Tuberculosis, and his office is in the hospital.

SELECTIVE SERVICE AND REHABILITATION OF SELECTEES WITH MINOR PHYSICAL DEFECTS

Tests of a physical rehabilitation program, intended to make many registrants who were rejected because of minor physical defects fit for active military service, have been authorized in Maryland and Virginia, National Headquarters, Selective Service System, has announced.

Authorization of the rehabilitation programs in the two states marks the beginning of a long-planned nation-wide physical rehabilitation campaign. When the results of these pilot tests are evaluated, a date for the inauguration of the national program will be set.

Only those registrants whose disabilities are certified by the Army as being remediable will be eligible to undergo treatment.

As one of the first steps in the Maryland and Virginia test programs, the Director of Selective Service of each state will submit to National Selective Service Headquarters lists of physicians and dentists qualified to correct physical defects of registrants. Physicians and dentists designated to render these authorized professional services will be paid by the Federal Government.

National Headquarters emphasized that any physician or dentist can apply to be designated to assist in the rehabilitation program. Physicians and dentists not already designated by registrants as their choice for dental or medical treatment, and other physicians and dentists who wish to take part in the program, may obtain the necessary application forms from their local boards.

THE HEALER'S PRAYER

Offered in Camp by a Medical Officer

God of the suffering, grant that the wounded may swiftly arrive at their hospital haven, so that the safeguards of modern surgery and the ministries of medicine may surround them, to the end that their pain is assuaged and their bodies are mended.

Grant that surgeons may have gentle skill and intelli-

FOR SALE

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gent foresight to bar the path to such sordid enemies as shock, hemorrhage and infection.

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Give us the instruments of our calling so that our work may be swift and accurate; but provide us with resourceful ingenuity so that we may do without bounteous supplies.

Strengthen our hands, endow us with valiant energy to go on through day and night, and keep our hearts and brains attuned to duty and great opportunity.

Let us never forget that a life or a limb is in our keeping and do not let our judgment falter.

Enable us to give renewed courage and hope to the living and comfort to the dying.

Let us never forget that in the battles to be won, we, too, must play our part, to the glory of a great calling and as humble followers of the Great Physician, who mercifully healed the sick. Amen.—Colonel John J. Moorhead.

—The Christian Advocate, February 26, 1942.

DR. DARBY, NOTED SCIENTIST IN VITAMIN FIELDS, ON BORDEN STAFF

The Borden Vitamin Company, which has been bringing into its fold a number of research and production leaders in that field, announces that Dr. Hugh H. Darby, distinguished Columbia scientist and author of many authoritative works, has joined its staff for research and development in the production and application of vitamins and hormones.

Dr. Darby, who has been with the Department of Biochemistry of the College of Physicians and Surgeons for the past seven years as research associate, is a specialist there on vitamins and hormones, achieving wide attention for his work on the extraction and physiology of sex hormones.

Among other distinctions, Dr. Darby is noted as the discoverer of the existence of Vitamin D in plant life, and for his spectographic research on vitamins A, D and K. He originated the system, widely used by the Department of Agriculture, of heat treatment for the destruction of harmful insects.

Announcement of Dr. Darby's new activities was made by Charles F. Kieser, Vice-President of The Borden Company and President of The Borden Vitamin Company, a division that has been expanding its activities widely in the production of vitamins.

Dr. Darby is a native of Scotland. He attended Cambridge University. He served with the Royal Engineers in the World War, emerging as a captain. He obtained the degrees of B.A. and M.A. at Columbia. That university also conferred the degree of Ph.D. on him in 1928. In that year, Dr. Darby joined the Department of Agriculture, with which he remained three years. Thereafter, he took up his present work with the College of Physicians and Surgeons.

For the past several years Dr. Darby's research and development activities at Columbia have been conducted under a grant of the Carnegie Corporation.

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Under the rules laid down by the American Academy of Pediatrics, their new educational-to-the-public film "When Bobby Goes to School" may be exhibited to the public by any licensed physician in the United States.

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PAIN MALADY

The Surgical Relief of Same

J. CALVIN WEAVER, M.D.
Atlanta

When DaCosta eulogized a surgeon as one with a touch as light as floating perfume, one with an eye as quick as the flash of a sunbeam, one with a heart as broad as humanity, one with a soul as sweet as the waters of Lebanon, he described one who should be not only the Nemesis of pain, but one who, at least in a great measure, should be its master as well.

Many patients bear an insiduous disease complacently until conditions come about that result in the symptom *pain* predominating, and it is this predominating pain in certain types of cases that has been appropriately dubbed "pain-malady," to which your attention is invited.

For years it has been my observation that the art of surgery has gradually been overshadowed by the science of surgery. This probably may be accounted for by the intensive, highly scientific courses given by the medical colleges of today by way of heading students, while yet interns, toward different specialties.

This is peculiarly unfortunate, as no branch of surgery makes greater demands on the art than the management and relief of this condition, *pain-malady*. We must have the art to be able to apply what science has found out.

For an understanding of the physiologic pathology of painful sensibility one must realize the large part played by vasomotor impulses in determining the appearance and the intensity of pain. This embraces the effect of heat or cold on their analogues, hyperemia or ischemia, and it is the manifestation of either of these which leads us on to surgery. There is no gainsaying the fact that a disturbance of vasomotor function can and does produce pain.

As a neat illustration of how pain resulting from a vasomotor disturbance can be relieved, it has been shown that a pain present in a limb which affects an area of distribution of a cerebrospinal nerve can be made to disappear if the condition of the circulation is altered by infiltration of the sympathetics with novocain, which abolishes for some hours or for some days the possibility of vasoconstriction.

In the bearing that the sympathetics have on the susceptibility to pain of certain people, not only the heightened vasomotor tone which has kept their nerves continually on the threshold of suffering must be considered, but also the part played by hormonal influences as well.

This brings us to the influence of the level of tissue calcium on the regulation of the senses, an equilibrium of calcium being necessary for sensory harmony. Calcium equilibrium implies normal parathyroids, which makes us glimpse the question of hyperthyroidism. Along the same line of thought the suprarenals may influence the functional activity of certain hyperesthetic temperaments. And then thyroxine, its regulating action, and the hyperaesthesia of subjects of exophthalmic goitre, as well as folliculine in certain types of cases. To try to follow this will lead us far afield, away from our main objective, the role of the sympathetic system in its bearing on *pain-malady* and the surgical management of these cases, the principal aim of which is to relieve and to cure.

Until a comparatively recent date, the surgery of pain has consisted exclusively in

Read before the Medical Association of Georgia, Macon, May 14, 1941.

the interruption of the pathways of sensibility at as high a level as possible, the merely mechanical act of interrupting the nerve current at a chosen point which comprises:

1. Neurotomy: operative division of a nerve.
2. Radicotomy: section of the posterior spinal nerve roots.
3. Cordotomy: section of the anterolateral pathways in the spinal cord for relief of pain.

On account of a divided peripheral nerve developing a neuroglioma of regeneration; on account of posterior radicotomies failing more often than they succeed; on account of cordotomies bringing disappointments by causing a new pain in place of the old, not to mention grave urinary disturbances, a new plan of attack had to be devised whereby the functional condition might be acted on through the medium of the sympathetics and endocrines.

One might ask on what hypothesis is interference of the sympathetics for relief of pain predicated. Pain may result from deficient blood supply in the region of the nerve endings of the centripetal nerves and around the touch-corpuscles of Wagner throughout the tissues. The ischemia, secondary to disturbance of the sympathetics, is sufficient to render them hyperexcitable or actually irritated.

Another explanation is that pain may be brought about by chemical changes in the local cell environment resulting from an alteration of the circulatory regime. When sudden chemical changes come about, certain new chemical conditions appear in the tissues which have a deleterious effect on the nerve endings, thereby producing pain.

For an interruption of the sympathetics, we have recourse to periarterial sympathectomy, to resection of arteries that have been reduced to fibrous cords, to the more formidable ganglionectomies, and to the simple procedure of infiltration with novocain locally of painful scars and sprains and direct infiltrations of the sympathetic trunks.

With these procedures in mind, in what major types of pain may one hope for relief or cure? The list comprises:

Pains of inoperable cancer.
Pains following a type of causalgia resulting from intensive deep x-ray therapy over the major nerve plexuses.
Ascending pains which follow certain peripheral traumatisms.
Pains of amputation stumps.
Pains of arteritis obliterans.
Coccygodynia.
Sciatica.
Angina pectoris.
Sprains.
Painful scars.
Pelvic pains accompanying sclerocystic ovaritis.
Postoperative pain following removal of malignant prostate.
Tuberculosis of the bladder.
Pains accompanying the scalenus anticus syndrome.

The exceptions to the pains that may be relieved by interfering with the sympathetic influence are trifacial neuralgia, glossopharyngeal neuralgia and meralgia paresthetica. These must be relieved by neurotomy. The relief of pain resulting from displacement of an intravertebral disc or pain from a neuroma of the cauda equina will require a laminectomy and removal of the disc or tumor.

Though sciatica is no longer in style and has been relegated to the horse and buggy age, certain cases of sciatica may still be relieved by appropriate medical treatment while others may be relieved by epidural injections of 1 per cent novocain through the sacral hiatus.

Throughout my forty years of medical and surgical practice, a patient in pain has had my deep sympathy and at no time could any stock be taken in "the false conception of beneficent pain," my reaction being "pain is always a baleful gift, which reduces the subject of it, and makes him more ill than he would be without it."[1] For years I floundered along, handling painful conditions in the generally accepted haphazard method of the times. The pain problem was much obscured by words. Protopathic sensibility, epicritic sensibility, proprioceptive sensations were high sounding terms good to cram down medical students' throats but were no consolation to me.

The light of day began to dawn for me when the following case, resulting from peripheral traumatism, was placed under my care and my extreme concern over the outcome stimulated me to use some common sense and to press my own initiative into service:

Report of Case

W. L., aged 40, a mill operator, stuck the blade of a pocket knife in the palmar surface of the left thumb. The wound became infected. The attending physician made a suitable incision and inserted a drainage tube. Ten days later another incision was made. Eventually the patient was advised to have his thumb amputated. When seen four months after the accident, the thumb was stiffened and the terminal joint was flexed. The thumb was three times its natural size, was blue and congested. Two or three points were excruciatingly painful and, when touched, acted like a trigger zone in tic douloureux. The pain radiated to the index finger; also up the forearm to the shoulder. The muscles in the forearm were painful to deep pressure.

Knowing that pain begets pain; knowing that physiologic rest was necessary for repair; knowing that an inflamed joint would become flexed from the distribution of the same nerve to the joint and the muscles moving it, the conviction came to me that for this thumb to be saved, for the circulation to be improved and the swelling to subside, resolution must be brought about by relieving the pain. So the following day, the interrosseous nerves of the palmar surface of the thumb were blocked with 1 per cent novocain, following this with 5 cc. of alcohol over each nerve. The injection of novocain caused pain to flash instantly up to his left shoulder. The injections, however, gave immediate relief and perfect physiologic rest to the member. By applying dressings locally to "reduce the sensibility of the filaments of the skin and indirectly the muscles under them,"[2] the thumb rapidly improved and in nine days the patient was able to work at a new assignment.

This did not afford all the light, though, for about this time I chanced on the classic volume, "Surgery of Pain," by Leriche, which gave me more light and a new conception of pain and a better understanding of why the thumb was saved.

Before going further allow me to advise you to be very circumspect about assuring much relief to any patient who has been using opiates for any length of time. Few will admit relief from any procedure whatsoever. A correct evaluation of results is also difficult to obtain in some patients where the question of compensation is involved.

Trifacial neuralgia or tic douloureux is so self-evident, the diagnosis need not be mentioned. It may be confined to any one branch or any combination of the three branches of the fifth nerve.

For involvement of the supraorbital branch, either injection with alcohol may be done or avulsion of the nerve through an incision in the brow. In either event, be sure of your diagnosis for it might be embarrassing to have some rich old lady telling you the next day the brow is numb but the pain in the back of the neck and shoulder is still present. For relief of "tic" of the second branch, or infraorbital, I prefer avulsion to alcohol injection. Through a half-inch incision under the upper lip at the junction of the lip and gum, the nerve is easily reached and twisted out. With two or three sutures of No. 000 chromic catgut the incision is closed.

Illustrating this procedure:

Mrs. C. B., aged about 50, had been having recurring pains in the right side of her face for six months or more without relief from medical treatment. The attacks were typical of "tic", coming at intervals like a bolt from the blue. The pain was confined to the distribution of the second branch of the fifth nerve, though some overflow pain had reflected up on the forehead. Patient was admitted to the Crawford Long Hospital May 2, 1940. Under local anesthesia, avulsion of the infra-orbital branch of the fifth nerve was accomplished through a small incision as just described. There was immediate relief from the pain.

In three or four weeks she developed a new pain on the same side which was confined to the area of distribution of the lingual branch; this was immediately injected with alcohol, with complete relief. The superficial location of this branch makes injection comparatively easy and generally free of complications.

My observations of the work of others experienced in this line and my own personal efforts have caused me to revolt against deep alcohol injections of the superior and inferior maxillary branches, as this seems unscientific. Besides sometimes causing palsy of the sixth nerve, deep alcohol injections in such cases may produce hematomas and extensive ecchymoses from puncture of the internal maxillary artery or fibrosis of the pterygoid muscle, while the relief or partial relief is no more lasting than a simple avulsion.

If the patient has had previous alcohol injections, be particularly leary of repeating the injection as you may find yourself in a few days face-to-face with a corneal ulcer.

As neither procedure can be expected to last over two years, most patients eventually come to a radical Gasserion ganglion operation, which means section of the sensory root and entails a rather formidable head operation, but which should give complete relief with a minimum amount of danger, if done by the orthodox exposure of the Gasserion ganglion.

"Glossopharyngeal neuralgia is similar to trifacial neuralgia. The pains are spasmodic, excruciating and lancinating. They radiate from the pharynx and tonsillar fossa to the ear. The pain is brought on by swallowing or yawning, and lasts for only a few minutes. Temporary relief may be obtained by peripheral avulsion. The only assurance of permanent relief lies in di-

vision of the glossopharyngeal nerve proximal to the superior ganglion, through an intracranial approach.."[3]

Neuralgia of the external cutaneous nerve, most frequently referred to as "meralgia paraesthetica," is characterized by pain, paresthesias and sensory disturbances in the distribution of the external cutaneous nerve of the thigh; that is, the anterior and inner aspect to the knee. From dissection of several cadavers it has been considered a true traumatic neuritis, resulting from a sharp angulation of the nerve as it leaves the pelvis, which causes a constant low grade trauma resulting in irritation followed by physiologic interruption. The treatment "consists in section of the nerve at the exit from the pelvis without excision, the nerve ends being left in alignment so that spontaneous regeneration and subsequent nerve lengthening may take place."[4]

Painful scars may sound too trivial to be considered but every now and then such a case will be encountered of sufficient severity to give not only the patient a headache, but the surgeon as well. Such a case follows:

Mrs. L. H., widow for 14 years, was a power-machine operator. Her life had been a hard, nerve-racking one. In March, 1936, she sustained a fall downstairs which resulted in a deep cut on her forehead, extending from the glabella to the hair line and following the hair line for about 1½ inches to the left. She was confined to the hospital for a week. The wound healed and for three years she apparently was well. The scar showed no inflammation.

About a year before I saw her she developed headaches, bitemporal at first and not extremely severe. Later the pain located in the left temporal region and became almost unbearable. Besides the temporal pain, there was present a drawing sensation in the scar, which preceded the headaches. The scar was infiltrated weekly with 1 per cent novocain; at each treatment, calcium gluconate solution, 10 cc., was given intravenously. These treatments were repeated weekly for five weeks, at which time the patient was relieved entirely. She is still free of pain and working daily.

Another painful scar case was a young married man who had undergone an operation for the removal of a pilonidal fistula. A straight vertical scar was perfectly healed just over the lower portion of the sacrum. No signs of inflammation were present, but there was continual pain at the site of the scar.

A weekly infiltration of the scar with 1 per cent novocain solution was recommended, to be done by his physician, and brought about complete relief after two weeks.

Illustrating "ascending pains which follow certain peripheral traumatisms:"

A man, aged 45, fell down a flight of stairs in March, 1938, injuring his right ankle and foot. X-ray examination failed to reveal any fracture. Much swelling and discoloration followed the injury. Patient was confined to bed one week, then used crutches for six weeks, then a walking cane. He has not been able to work since the accident and has been in a hospital since June 30, 1939. Pain has continued in his foot and ankle, has gradually ascended up into his leg, then up into thigh and, at times, into right hip.

In October, 1939, the second, third, fourth and fifth lumbar sympathetic ganglia were infiltrated with a 1 per cent novocain solution. Pain in right side of leg, foot and three outer toes was relieved immediately, but some residual pain in ankle and under heel remained. It was recommended that the above procedure be repeated every four days but the first treatment gave him so much relief he refused to remain for further treatments.

This leads on to the immediate treatment of sprained ankle. If the following had been instituted in the above case, it would probably have prevented the hospitalization of the patient.

For a long time I was loath to try infiltration of the tissues with novocain solution, depending entirely on rest and strapping the ankle with adhesive, an incorrect strapping at that. So many years have passed since Major Gibney improvised his effective treatment for a sprained ankle, "when soldiers of the U. S. Army were pursuing Chief Geronimo's Apache Indians around Arizona," that few doctors are familiar with the technic of his dressing and fewer use it.

By flooding the tissues on the injured side of the ankle with deep injections of a solution of 1 per cent novocain, and by applying a correctly placed Gibney dressing, you will find that "with active cooperation of the patient, recovery is a matter of one to three days, not weeks or months."[5]

Illustrating the efficacy of this method of treatment, a young woman in her thirties was lifted almost bodily into the office on account of a recent severe sprain of an ankle. She could not bear to put her foot to the floor. The outer side of the ankle was badly swollen and there was definite ecchymosis. The swollen area was infiltrated immediately with 1 per cent solution of novocain and a typical Gibney dressing was applied. The patient walked out of the office unassisted with negligible discomfort, drove her car the following day and was able to be up and about in active attendance on her duties.

Sciatic syndrome. As "there seems to be no sure way of telling which patients will be relieved by conservative treatment, as often happens even when there are signs of ruptured discs and as in most series of patients followed over a long time, the results of operative treatment are disappointing in a fair proportion,"[6] it has been my policy to give my patients conservative treatment before

putting them to the expense and often discomfort of x-ray studies, and lipiodol injections. As might be expected this policy results occasionally in the loss of a patient and an operating fee. This is compensated for if the patient can recover with conservative treatment.

A striking example of sciatic syndrome cured by epidural injections of novocain solution follows:

A male patient of magnificent physique had suffered 14 months with pain in his right leg. The clinical symptoms of sciatica were all present: pain, absence of the tendon Achilles reflex and atrophy of the muscles. During the 14 months of constant suffering he consulted numerous prominent doctors from Miami, Fla., to Baltimore, Md. For a month he was under the immediate care of one of America's most widely exploited neurosurgeons and an orthopedic surgeon of equal prominence, only to return home without relief.

One epidural injection of 1 per cent novocain solution gave immediate relief. Ten days later he wrote, "I have had no pain since you gave me the injection and am now walking a mile a day trying to develop the muscles of my leg." He made a complete recovery without further injections.

Of course this is hardly one chapter of the sciatica story. Another case of great interest reveals sciatic pain from a different source. The pain in her right thigh was horne complacently for the first year and for the last two years had steadily grown worse despite continual treatment. On account of the x-ray films of Feb. 2, 1940, showing rheumatic deposits of the lumhar spine, she was treated along that line until July 2, 1940, when the pain became almost unbearable and she entered the Crawford Long Hospital. Another x-ray examination was made following an intradural injection of lipiodol. This was interpreted as showing a filling defect between the fourth and fifth lumbar vertebrae. As so much had been written about protruded discs and as the bulletins were constantly listing operations for same, it seemed that I was about to stumble into one. A laminectomy failed to show a ruptured disc, but palpation over the dura revealed a definite, hard mass within, which proved to be a neuroma. It was removed, the pain vanished and the patient began immediately to get much needed sleep.

When Weir Mitchell, in describing causalgia, said, "Its intensity varies from the most trivial burning to a state of torture, which can hardly be credited, but which reacts on the whole economy, until the general health is seriously affected," he put on record a clinical entity that gives one a shudder to behold.

Different degrees of injury bring about the same clinical symptoms. In some, "there is no vascular or nervous lesion." In others, "there is only a superficial lesion, a mere surface graze of an artery or vein." Not infrequently "there is an actual wound of an artery or vein. Finally, in a last group, are cases in which one or more nerves have been wounded."[7] Each group becomes a pain malady.

When one recalls the unsatisfactory attempts made to relieve these patriachs of pain no more than a decade ago with mutilating neurotomies and the disappointing results that left them even worse off, it is more refreshing to be able to now offer relief of the pain and with improvement of the general condition.

A recital of the following case will suffice to refresh your mental picture of causalgia:

A married woman, 56 years old, fell in 1937 and caught on her right hand, the entire weight being thrown on the extended hand. She immediately felt a tingling from the jolting of her right arm and shoulder. For several months she had no trouble from this fall; then her arm and right hand began to swell. This swelling would remain a while, then gradually subside only to return in another week. The initial swelling was not attended with any pain. After a few remissions the swelling returned and continued. About one year after the fall she developed a lump or pone at the side of her neck, and another below the external third of the clavicle. She was advised to go to the Steiner Clinic where x-ray treatments were given. At first the swelling of the arm and hand subsided and the lump in her neck faded away.

Previous to the x-ray treatment, her fingers were movable. She could flex and extend them, and despite the strutted, swollen condition, she still had good use of them. In November, 1939, at the finish of the course of x-ray treatments, she began to notice pain in the second and ring fingers of the right hand, followed by numbness. The pain became worse and spread over her whole hand. The fingers and thumb became flexed and later a stiffness of the joints appeared. The hand now has a smooth, glistening look and is colder than her other hand. The nails are ridged and there are definite trophic changes. Her right elbow is also flexed about 45 degrees. On cool mornings there seems to be no way to get the hand warm except to let hot water run over it and to apply hot towels; then it will become red and warm for a little while.

On Nov. 7, 1940, she was operated on, a periarterial sympathectomy being done. It is here that the surgeon needs a steady hand and a "touch as light as floating perfume." In this case a high periarterial sympathectomy was done, for to be effective a sympathectomy must he done on the segment of the artery which controls the region of the wound.

Details of the operation will not be given. Two small points of great importance will be mentioned however: if the adventitia of the artery is difficult to distinguish, sprinkle normal salt solution over the artery and the

adventitia will turn white. In the immediate work on the artery, a delicate blade must be perfectly sharp. For me, the ideal combination is a Bard-Parker product, a No. 15 blade in a No. 5 handle.

Immediately there was definite local improvement. The pain was greatly alleviated, though not entirely. The color of the hand became normal, the swelling cleared up, the pulse was good, some of the movements improved and she could get fairly good sleep.

Her teeth were in terrible condition, and several had to be extracted. Before this was done she developed mild mental symptoms. Later, she fell and sustained a small fracture of the right shoulder joint. As a result, she now has swelling of the right elbow, but none in her hand. With elimination of focal infection she has improved very satisfactorily from the mental condition, while the pain has been greatly lessened.

The pain accompanying the scalenus anticus syndrome is mentioned to call your attention to the syndrome which is frequently overlooked. With numbness starting in, say the ulnar nerve supply, with gradual atrophy of the intrinsic muscles of the hand and the thenar eminence, with a drawing or flexion of the fingers, followed by muscular weakness, and constant nauralgic pains in the hand, you will recognize this as a cervical rib or scalenus anticus syndrome. Cutting across the anterior scalene muscle will cure a large percentage of the patients without removing the cervical rib.

In coccygodynia, do not rush in and remove the tip of the coccyx or the entire coccyx. Instead, flood the tissues with 1 per cent novocain solution. This injection may be repeated at weekly intervals until a complete cure is brought about.

For pain associated with malignant conditions of the prostate in the male and with cancer involving the female genitalia, most generally the pain is more pronounced on one side. In these cases, where the relief of pain is the great desideratum, the simplest method is an intraspinal injection of absolute alcohol, 0.2 to 0.6 cc. being used for each injection.[8] Personally I would not use this for relief of any pain other than cases of malignancy.

If this does not give entire relief, then one is justified in resorting to a pelvic sympathectomy. Though this necessitates a laparotomy, the relief of pain during the remaining months justifies the procedure. To assure complete relief, peri-iliac and periaortic sympathectomy should be done, plus resection of the presacral nerve.

For relief of pelvic pains accompanying sclerocystic ovaritis, resection of the presacral nerve will suffice.

Thrombophlebitis. In all likelihood every doctor in this audience has handled one or more cases of thrombophlebitis. You have witnessed the suffering, the swelling of the leg, the edema and have seen patients limping around, trying to get over such an attack. All in all, a most melancholy affair and another illustration of the contention that vasomotor upsets can and do cause pain.

Without going into the physiologic pathology of the condition, it is most gratifying to know that in cases involving the lower extremity, blocking the lumbar sympathetic ganglions with 1 per cent novocain solution gives immediate relief of the pain and, if repeated every two or three days, will bring about a cure. The same results may be expected in involvement of the upper extremity if the stellate ganglion is injected with 1 per cent novocain solution.

Two other conditions must be mentioned before closing: angina pectoris and thrombo-angiitis obliterans.

Angina pectoris should be of interest to each one here — of personal interest — for every year at least 150 medical men are touched on the shoulder with the flaming sword and their days ended by angina. This is indeed a pain malady, another illustration of vasomotor upset.

For the relief of the pain, two procedures are available: First, operative. As Leriche says, ". . . if we wish to interrupt the pathway of the reflex in angina pectoris, the simplest and most certain way is to excise the ganglion which is its center; that is to say, the stallate ganglion. If this procedure is too formidable, then infiltrate the ganglion with novocain."

And now, last but by no means last, is thrombo-angiitis. I want this to be impressive so again I must let Leriche tell you:

"In the inferno of our imagination into which the surgery of pain drops us, here is one of the most heartbreaking conditions of all: the pain of thrombo-angiitis. To suffer every day. To live through nights of ever

renewed suffering. To feel the pain increasing, extending, though already great enough. And in addition to feel one toe after another becoming painful, and to see them one after another, gradually change color, to watch during the passing months the appearance day-by-day of a red or black spot on one of the phalanges. Then a little sore under the edge of the nail; to realize that the dreaded gangrene has begun, is developing in spite of anything one can do, and is gradually eating away the flesh; to be obsessed with the thought that, though still alive, one is wearing away painfully, bit by bit; that when one has a limb on one side amputated, very soon the same thing will have to be done on the other side. Do you think that Dante ever imagined a torture more exquisite?"

In the treatment of this type of case, let us remember that an artery is a living organ, not just a hollow tube for transmitting blood, that spasm is a functional affair, that the disordered innervation of the artery wall is of more importance than the mere arrest of the current of blood in the artery.

Let us get the conviction that a patient is better off without a diseased artery, then it will be easy to see why a periarterial sympathectomy should relieve the pain and that there should be no despondent augury as to a resection of an obliterated segment.

Let me impress on you that *pain-malady* is "a disorder whose consequences we must not allow ourselves to regard with indifference, with which we must never compromise, and about which we must try to learn all we can in order the more effectively to counteract it."

On the fly leaf of an old book in my possession in bold handwriting is the following:

"To Dr. W. F. Westmoreland, Jr.,
from his Mother.
'When the art of preserving life is in question, neglecting to learn is a crime.'"

—Hahnemann.

REFERENCES

1. Leriche, Rene: Surgery of Pain, p. 24.
2. Hilton: Rest and Pain, p. 192.
3. Adson, Alfred W.: The Surgical Relief of Glossopharyngeal Neuralgia, Arch. Neurol. & Psychiat. 12:487-506 (Nov.) 1924.
4. Stookey, Byron: Meralgia Paraesthetica: Etiology & Surgical Treatment, J. A. M. A. (May 26) 1928.
5. Allen H. E.: The Gibney Dressing for Sprained Ankle, Northwest Med. 39:166-167 (May) 1940.
6. Tracy J. Putnam: Modern Medicine, (Feb.) 1941.
7. Leriche, Rene: Surgery of Pain, p. 184.
8. Greenhill J. P., and Schmitz, Herbert E.: Intraspinal Injection of Alcohol. J. A. M. A. (Aug. 10) 1935.

ORTHOSTATIC HYPOTENSION

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In 1925 Bradbury and Eggleston[1] first reported a study of three cases of orthostatic, or postural hypotension. The cardinal features of this condition are vertigo and syncope on assuming an erect posture, accompanied by a drop in systolic and diastolic blood pressure to shock levels without significant increase in the pulse rate. In addition, there are anhydrosis and aggravation of symptoms during the heat of summer. Also characteristic are: a greater excretion of urine at night, or when recumbent, than during the day; blood urea at upper limits of normal; impotence and loss of sexual desire; slightly low basal metabolic readings; an appearance of youthfulness; and slight, or indefinite, neurologic disturbances.

Not more than fifty cases have been reported since this original observation. This is probably due to the fact that the blood pressure is not routinely taken in both the erect and horizontal positions. More cases would doubtless be discovered were this done. In my own practice in the past two years, I have observed three patients with significant degrees of faulty postural adaptation.

Report of Cases

Case 1. Mrs. J. L., a 60 year old white housewife, in February, 1939, complained of dizziness, numbness in both legs, and staggering gait.

Three years ago she began having dizzy sensations, generally brought on by exertion or by standing. Sometimes a sudden change of position, as getting out of bed or standing up from a chair, would make her feel very uncertain of her position, dizzy, and apt to fall. On several occasions during the summer of 1938, she had fallen in a faint. She noticed that she suffered greatly from the heat, perspired very little and had a poor appetite. In fact, it was her fear of the summer which caused her to consult a physician in February. She had lost no weight recently but weighed only 114 pounds. Her best weight was 135 pounds in 1905. She had suffered rare headaches. Her vision was good; glasses had been worn for 25 years, and were changed a year ago. There were no dyplopia, blurring, or hallucinations. The hearing was good and there was no tinnitus with her dizziness.

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She had mumps, measles, and malaria as a child, and had influenza several times. A tonsillectomy was done at the age of 53. Occasionally a tight burning sensation under the sternum occurred at night. A chronic cough had troubled her for years but there were no night sweats, hemoptysis, or dyspnea. Her appetite was impaired at times; she was habitually constipated and took frequent laxatives.

Her father died of kidney trouble at 65 years; her mother died of tuberculosis at 41 years. One sister and two brothers are living and well. Three siblings died in infancy. A sister died of angina pectoris at 63 years; another sister died of pneumonia at 65 years. A brother died of lung cancer at 55 years.

The patient was a well developed thin, white female of 60 years, mentally clear and cooperative. There was a slight nodular enlargement of the right lobe of the thyroid, but otherwise the examination of the head, neck. and cranial neorves was negative.

The chest was of the long asthenic type, but resonance and breath sounds were normal. No rales were heard. The heart was not enlarged to percussion; sounds were of fair quality and no murmurs were heard. Pulse rate was 100 per minute; blood pressure was 175 systolic, 100 diastolic, recumbent. The abdomen was of the ptotic type. Rectal and pelvic examinations were negative.

The patient walked with a slightly broadened base; the legs appeared spastic and she had difficulty in maintaining balance when walking along a straight line. There was no ataxia while standing with eyes open, but with the eyes closed, there was marked swaying. Position of extended arms was fairly well maintained, but there was some tendency to flexion of the right elbow, and there was a rapid, fine tremor of the extended hands. There was moderate generalized weakness of the lower extremities with slight increase in extensor tone, and slight ataxia when sliding the heel along the shin. Reflexes were normal except for absence of ankle jerks, plantar reflexes and abdominal reflexes. Vibratory sensibility was moderately impaired in the toes and completely lost in the entire left leg below the hip. Joint position sense was retained, but pain, temperature, and pin prick discrimination were impaired in a patchy manner all over both legs.

Her hemoglobin was 86 per cent; red blood cells 4,160,000; white blood cells 7,600; of the white cells 60 per cent were polymorphonuclear neutrophils, 35 per cent lymphocytes, 1 per cent monocytes, and 1 per cent basophils. The urine showed acid reaction; specific gravity 1.006; albumen, trace; sugar, negative; microscopic, occasional red blood cell. Gastric analysis showed a maximum of only 8 degrees of free hydrochloric acid and 52 degrees of combined acidity. Blood, bile, and pus were not found in the gastric contents. Spinal puncture revealed normal spinal fluid. The basal metabolic rate was zero.

X-ray examination of the chest showed moderate increase in bronchial markings throughout the chest, with numerous calcified glands in the left hilus; gastro-intestinal series showed evidence of considerable visceroptosis with spastic colon.

A diagnosis of postero-lateral column sclerosis was made. Because of hypochlorhydria, this was thought to be due to avitaminosis, chiefly B deficiency. Moderate hypertension, arteriosclerosis and healed tracheobronchial tuberculosis were also diagnosed.

She was given large doses of thiamin chloride and nicotinic acid by mouth and parenterally over a period of several months without much change in her condition except that she gained six pounds. In October, 1939, she suffered severe dizziness with slight nausea while lying in bed. At that time her blood pressure was found to be 180 systolic and 100 diastolic, recumbent, and it dropped to 80 systolic and 60 diastolic when she stood. Her pulse rate was 90 beats a minute while recumbent and 100 when erect.

A diagnosis of orthostatic hypotension was made. Her reaction to atropine was interesting in that 1/75 grain by hypodermic caused no significant change in pulse rate. Pilocarpine, grain 1/10, by hypodermic caused severe sweating over face, neck and body, and slight sweating over her legs. She stated that she could not remember sweating that much before.

On subsequent examinations, her tension varied within somewhat wide limits. A tight fitting ptosis girdle was fitted, and her pressure reading on several occasions showed an average of 170 systolic, 100 diastolic, lying down; 150 systolic, 100 diastolic, sitting; 120 systolic, 100 diastolic, standing with girdle and 110 systolic, 80 diastolic standing without girdle.

In January, 1940, because of the type of nerve lesion, she was started on liver extract, parenterally. Subjectively she improved somewhat, but not objectively. In February, 1940, she was observed in two attacks of ischemia of the right third finger, strongly suggestive of Raynaud's disease.

In April, 1940, Dr. Richard Wilson saw her and thought her neurologic lesions were probably due to arteriosclerosis of the spinal cord. He suggested the use of vitamin A in large doses. This again was followed by subjective but not objective improvement.

An attempt was made to use ephedrine sulphate but this caused severe cramp-like pains in her legs, and had to be discontinued. Benzedrine sulphate had no apparent beneficial effect. Prostigmine caused her to feel very drowsy and dizzy and had no beneficial effects. The use of liver extract has been continued and seems to be having a definitely beneficial effect at last; but it must be remembered that spontaneous variations in condition are observed in these cases.

Case 2. Mrs. G .W., aged 60, when first seen in 1938, was bedridden and weighed 63 pounds; height 63 inches. She had been ill for at least ten years, suffering from malnutrition, weakness, constipation, and more recently hallucinations and nervous instability. Her illness had begun with what was probably encephalitis, but several consultants had not been able to agree on this.

Mrs. W. was an elderly lady with pyorrhea, chronic bronchitis, emaciation, and edema of the extremities. Her blood pressure was 90 systolic, 60 diastolic, recumbent, and 70 systolic, 50 diastolic when sitting in a chair. Her blood count, urinalysis, and blood Kahn tests were negative.

After an extended period of forced feeding of high vitamin diet with vitamin concentrates, her condition gradually improved both mentally and physically. Her weight increased to 105 pounds, and edema of the extremities disappeared. Blood pressure readings averaged 120 systolic, 70 diastolic recumbent, and 70 systolic, 50 diastolic, erect. Standing seemed to make her very nervous and caused exacerbations of her mental confusion. Her family was warned that attacks of syncope might develop when she was in an erect position, and on several occasions this has occurred after she had stood to comb her hair in the morning. While she has not been seen in such an attack, the pressure shortly after an attack has been as low as 60 systolic, 40 diastolic erect and 130 systolic, 80 diastolic recumbent.

Mild relief of symptoms has followed the use of a well fitted girdle, but benzedrine has not helped. She would not try ephedrine because of an idiosyncrasy discovered some years ago when she suffered from asthma.

Case 3. Mr. R. G. C., a 25 year old white clerk, complained of pain in his chest of one week's duration. Past and family histories were irrelevant except that for some months he had noticed dizziness and blurring of vision on arising from his bed or chair in the morning. He had not fainted, and had attributed his symptoms to the glare of light in his bedroom window. The cause of his chest pain was thought to be due to trauma produced by his infant son's predilection for jumping on the paternal chest in the morning. However, the blood pressure was 110 systolic, 90 diastolic, erect, and 125 systolic, 80 diastolic recumbent, which was thought to explain his dizziness and blurring of vision on arising. No abnormal neurologic signs were detected.

On benzedrine sulphate, 10 milligrams, every four hours, he improved markedly in a short time.

Discussion

This syndrome depends primarily upon cerebral anemia when the patient is in the upright position. This would always occur were it not for reflex vasoconstriction in the splanchnic and lower somatic areas which counteracts hydrostatic effects of changes in position on the vascular system.

Some cases are idiopathic but many are associated with other lesions of the nervous system. Ellis and Haynes[2] reported characteristic drop in blood pressure in the sitting or standing position in ten of seventeen successive cases of tabes dorsalis. Other central nervous system lesions sometimes associated with orthostatic hypotension are myasthenia gravis, syringomyelia, arteriosclerotic degeneration of the patchy type disseminated throughout the nervous system, traumatic hematomyelia and an acquired form following anterior rhizotomy of the lower thoracic and lumbar spinal nerves of hypertensive patients.

That the essential pathologic process affects the sympathetic nervous system is shown by the frequent loss of sweating as well as reflex vasoconstriction and reflex pulse acceleration with drop in blood pressure. Bradbury and Eggleston[1] thought the essential lesion was a deficiency or a paralysis of the myoneural junction of the splanchnic vessels since pilocarpine still caused sweating in their patients.

In studies of the circulation time, Kvale[3] and his associates have shown that after extensive bilateral subdiaphragmatic sympathectomy for hypertension the average "arm to foot" circulation time is about three to five seconds faster than normal in the recumbent position, this being due to peripheral vasodilation. When these patients stand, the blood pressure falls, but there is compensatory pulse rate acceleration. However, the circulation time is greatly increased.

Two patients with spontaneous orthostatic hypotension were studied for circulation time but no reactions to the test fluid occurred within two minutes when the injections were made with the patient standing and consequently had marked decrease in blood pressure. When they lay down again, though, reactions produced by the injected solution occurred within about the same time after lying down as they did after the moment of injection when the injections were made originally with the patients lying down. It appeared from this that the blood was almost entirely stagnant in the veins when these two patients were standing, and this explains the marked weakness which prevented their standing more than two or three minutes.

Experimental studies with external hydrostatic pressure, application of tourniquets to the lower extremities, and with abdominal supports have shown that pooling of the blood in both the abdomen and lower extremities is necessary to produce the drop in arterial pressure which occurs in the upright position. Furthermore, by transfusion experiments, affecting the vol-

ume of blood pooled in various positions, it is shown that the primary cause of orthostatic hypotension is not the pooling of an abnormal amount of blood, but presumably an abnormal response to the pooling of a normal quantity of blood. It is the absence of vasoconstriction in other parts of the body when the vascular bed of one part of the body is dilated that is the essential feature of orthostatic hypotension.

This failure of vasoconstriction in response to fall in blood pressure could result from, (a) loss of intrinsic capillary and arteriolar tone, or (b) interference with the reflex which regulates arterial pressure. Against the loss of capillary tone is the demonstration[4] in some of these patients that heat applied locally caused vasodilation in the vessels of the extremities and cold applied locally caused vasoconstriction. Therefore, postural hypotension is a disease of the nervous system in which reflexes which control the level of arterial pressure do not function properly. Theoretically, these phenomena could be explained by, (1) lesions in the afferent receptors of the carotid bulb and aorta, (2) lesions involving the spinal efferent tracts, (3) lesions of the sympathetic ganglions or nerves, and (4) lesions in the autonomic centers in the central nervous system.

Ellis and Haynes[2] demonstrated that the carotid sinus responded normally to cyanide and that pressure on the carotid sinus caused a fall in arterial pressure in a case of postural hypotension, thus ruling out a lesion of the afferent receptor system. They also reported a case in which a traumatic lesion of the upper dorsal portion of the spinal cord probably involved the efferent limb of the postural reflex arc.

Stead and Ebert[4] conclude an exhaustive study of three cases of orthostatic hypotension with the belief that the lack of vasoconstriction in response to fall in arterial pressure is produced by a lesion or lesions in the sympathetic centers or their efferent tracts in the central nervous system rather than by lesions in the more peripheral portions of the postural blood pressure reflex arc. In certain patients, only the postural vasoconstriction reflexes are affected. With more extensive lesions, disturbances of sweating, and absence of an increase in heart rate when blood pressure is lowered may be observed.

Treatment

Abdominal supports have relieved symptoms in some cases. Relief of symptoms and eventual recovery have been reported following the use of ephedrine sulphate, paradrine, and benzedrine sulphate, or combinations of the last two drugs. It must be remembered, however, that spontaneous fluctuations in conditions are rather marked in these cases and the value of any cure must be appraised with this fact in mind.

In Case 1 of my group there have been no attacks of syncope while the patient was taking liver extract parenterally, but there was a definite exacerbation of neurologic symptoms and dizziness on arising in the morning during a period when the treatment was neglected.

Summary and Conclusions

1. The symptom complex known as orthostatic hypotension has been described.
2. Three case reports showing significant degrees of this condition have been outlined.
3. A discussion of studies seeming to locate the essential pathologic changes in the sympathetic nervous system has been given.
4. Treatment by supporting abdominal girdles, by ephedrine, benzedrine, and paradrine has been discussed.
5. By recording the blood pressures in both erect and recumbent positions we may increase our detection of this syndrome.

REFERENCES

1. Bradbury, S., and Eggleston, C: Postural Hypotension, Am. Heart J. 1:73, 1925.
2. Ellis, L. B., and Haynes, F. W.: Postural Hypotension with Particular Reference to Its Occurrence in Disease of Central Nervous System, Arch. Int. Med. 58:773 (Nov.) 1936.
3. Kvale, Walter F.: Allen, Edgar V., and Adson, Alfred W.: The Rate of the Circulation in the Arteries and Veins of Man. II. Studies of Hypertension, of Orthostatic Hypotension and of the Effects of Sympathectomy. Am. Heart J. 18:537 (Nov.) 1939.
4. Stead, Eugene A., Jr., and Ebert, Richard N.: Postural Hypotension, a Disease of the Sympathetic Nervous System. Arch. Int. Med. 67:546 (March) 1941.

DISCUSSION ON PAPER OF DR. JOSEPH C. MASSEE

Dr. Harry T. Harper, Jr. (Augusta): Dr. Massee is to be congratulated on his able coverage of this subject, especially in view of the fact that he has been able to make this diagnosis in three patients. since there were, until 1938, only thirty-eight such cases reported in all the medical literature. It is interesting that

MacLean and Horton of the Mayo Clinic think that this entity is frequently associated with myasthenia gravis. They think that there is sometimes present a triad consisting of myasthenia, involvement of the effector endings of the cholinergic nerve system or the sweat glands, producing anhidrosis, and involvement of the effector endings of the adrenergic nerve system or the vascular smooth muscle, producing the abnormal fall in blood pressure. They advise that prostigmin should be used as a diagnostic test in such cases. If there is a beneficial response it means that such a triad is present and that this is probably a first or subclinical stage of myasthenia gravis and that prostigmin should be used therapeutically.

Barker of the neurological department at the Mayo Clinic thinks that this condition is definitely a disorder of the sympathetic nervous system and that the pathology consists of patchy sclerosis in the brain and spinal cord secondary to the intermittent vascular changes. He emphasizes the decrease in the pulse rate with the fall in blood pressure, the increased urinary output at night and the increased severity of the syndrome in summer weather.

The differential diagnosis in postural hypotension is a matter of some importance. Carotid sinus syndrome must always be thought of and is easily ruled out by pressure on the carotid sinus. Spontaneous hypoglycemia can simulate this condition. In this, the weakness usually comes on three or four hours after eating and is relieved by the taking of food. Heart block can produce symptoms similar to these which are due to cerebral anemia dependent on the block. Food sensitivity can occasionally produce allergic dizziness. In these cases, the history is most important and suggests the diagnosis plus history of other allergy and the exclusion of the other disorders. Disease of the labyrinth, a toxic labyrinthitis or secondary to otitis can produce these symptoms. And finally, Meniere's syndrome must he ruled out, in which there is progressive deafness associated with attacks of vertigo.

The practical importance of this is that we must keep it in mind, especially in any person complaining of vertigo, weakness, dizziness, or transient visual disturbances.

Dr. Joseph C. Massee (Atlanta): Stead and Ebert have stressed the fact that these patients, when they do go into attacks of syncope, do not appear like patients fainting ordinarily. They do not have the pallor and sweating and distress that patients who ordinarily faint have or that patients with hypoglycemia are apt to have. They seem to maintain normal color and go into a faint without very much distress. In fact, repeated attacks don't seem to make them feel very bad. Facetiously, I said when I discussed this the other day, that I felt that the ideal occupation for a person with orthostatic hypotension would be swimming instructor; standing in water level with the heart or shoulders they have no symptoms whatever. One of my colleagues suggested that it was very good treatment, also, since standing in water they would be afraid to faint anyway.

THE PHYSICAL CONDITION OF GEORGIA'S MANPOWER AS REVEALED BY SELECTIVE SERVICE

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In attempting an evaluation of the physical condition of Georgia's manpower, several vital factors should be considered. The number and percentage of registrants in good physical condition; the number and percentage found to be disabled; the type and degree of disability; and the probable cause and the possibility of remedy. As we investigate the facts that will be presented in this paper, one question probably will be prominent in your minds: Will our present-day knowledge substantially benefit the next and future generations?

No attempt will be made to give in this brief discussion a tabulation of all disabilities found on examination of Georgia registrants. The principal causes of rejection will be discussed and a few slides shown illustrating the figures quoted in this paper.

To more easily appreciate the differentiation in classification, please bear in mind there are three types; i.e., I-A, I-B, and IV-F.

The physical standards of Selective Service are high and only those in excellent physical condition are acceptable for immediate training. They must be physically, mentally, and morally fit. The classification of such men is I-A. Those with minor physical defects that are remediable are classed I-B; those with severe defects—physical, mental or moral—are placed in Class IV-F. This means that those in the latter group are considered permanently unfit for military service. The men in the I-B classification are eligible for Class I-A after having the minor defects corrected.

The young soldier derives many benefits from a year's training in the Army. He learns to appreciate the value of discipline, courtesy, good food, exercise, sleep, personal hygiene, devotion to duty, and he

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acquires a greater love for his native land.

Good health is not appreciated until symptoms of certain diseases appear. To enjoy and maintain good health, an ample supply of food is required. The winning of a war is a race for food. To win a war, food is necessary; the soldier and civilian must have it, and in sufficient quantity and quality. Good food makes sound bodies. General Hershey, Director of Selective Service, recently addressed the National Nutrition Conference for Defense and stated that his observations indicated that about one-third of the men rejected by the Selective Service Boards for physical causes had obvious defects resulting from either undernourishment or wrong nutrition.

When a registrant begins the life of a soldier, he gets a well balanced and plenteous diet. Normally he has regular and ample time to eat. He is given sufficient exercise to improve his appetite and rest periods to insure proper digestion.

A large percentage of the rejections by local boards and at the induction stations is directly attributable to improper or insufficient food. Among these causes of rejection are underweight, bad teeth and gums, various skin conditions, and certain nervous disturbances — maladjustment to surroundings, etc. Poor social contacts are often due to malnutrition.

Figures on rejections for the period of December 1, 1940, through March 31, 1941, show that the highest percentage of rejections for that period was for dental defects which accounted for 14 per cent of the total rejections at the Army induction stations. This was closely followed by venereal diseases with 13.2 per cent; diseases of heart and blood vessels 12.6 per cent, and eye conditions 12.2 per cent. These four principal causes represent 52 per cent of the rejections for that period.

For the month of April the highest percentage of rejections was for musculoskeletal defects which accounted for 17.4 per cent. This was followed by venereal diseases with 15 per cent, then heart and blood vessels 12.6 per cent, and nervous and mental 11.6 per cent. This increase in rejections for nervous and mental conditions is attributable to the fact that at this time additional psychiatrists were added to the examining boards at the induction stations. During the previous period of December 1, 1940, through March 31, 1941, the percentage for this cause was low because up until April not very much attention had been given to the mental condition of the registrants, but with the addition of the psychiatrists to the examining boards the rejection rate for these conditions rose to take its place among the four principal causes of rejection. Dental conditions were fifth in line of importance for this period with 9.7 per cent.

For the month of May the principal cause for rejection was venereal diseases with 18.8 per cent, which shows a marked increase. By this time it had become generally known that registrants having gonorrhea were not acceptable for induction. It may be true, as several observers have suggested, that many registrants purposely contracted the disease so they would be rejected. Heart and blood vessels and musculo-skeletal tied for second place with 11.5 per cent for each cause. Next came nervous and mental conditions with 10 per cent, which showed that the psychiatrists were still on the job. Dental rejections for this period represented 9.2 per cent of the total.

For the month of June nervous and mental conditions accounted for 32.8 per cent of the rejections. This large percentage can be explained by the fact that in the month of May the Selective Service Regulations were amended so as to exclude from service any registrant who has not the equivalent of a fourth grade education. Under the system of examining registrants and furnishing them to the induction stations for filling calls, rejections for this cause were not noticeable during the month of May but showed up in June. Lack of education accounted for about one-half of this large percentage of 32.8 per cent. The next highest percentage of rejections was 13 per cent because of lung conditions. This is its first appearance in the principal causes for rejection. This may be accounted for by the fact that in the early days of Selective Service, many young men were

inducted without having x-ray examinations of their chests. Lack of proper facilities may have been responsible. Now all selectees have their chests x-rayed when inducted and again on discharge from the service. All those who were inducted without x-ray examination have subsequently been called up, or will be called, for the x-ray examination. Therefore, every man in service will have had this particular type of examination made. Next came 12 per cent for dental defects. Then musculo-skeletal and venereal diseases tied for fourth place with 9 per cent each.

For the month of July nervous and mental conditions still held first place with 36.19 per cent. Venereal diseases came next with 15.6 per cent, then heart conditions 11.6 per cent, hernia 10.2 per cent. For this period dental conditions accounted for 8.7 per cent.

This is the last period on which we have statistics on rejections.

A study of the figures on white and colored rejections for this entire period from December 1, 1940, through July 31, 1941, shows that more than 25 per cent of the Negroes rejected at the induction stations were rejected because of venereal diseases and less than 5 per cent of the white rejections were for this cause. The figures on heart and blood vessels show that more than twice as many Negroes as whites were rejected for this cause. Could the larger percentage of Negroes rejected for heart conditions be attributable to the correspondingly higher percentage of Negroes having venereal diseases?

It is also interesting to note that dental conditions have consistently been one of the principal causes of rejections. The figures show that the percentage of Negroes rejected for dental conditions is lower than the percentage of whites. This is probably due to the fact that Negroes (especially in childhood) eat more rough foods, fruits and vegetables than do white people, and less of the more expensive meats and carbohydrates. Much of the food which comprises a large part of our diet is so highly refined that it has lost many of its qualities which are needed for good health.

The information revealed by these illuminating statistics should be sufficiently stimulating to bring about an investigation of the diet and habits, not only of young people in Georgia, but of pregnant women, both white and colored.

There is only an occasional Negro rejected because of mental conditions other than lack of education, while those rejected for psychoneurosis are almost all whites. The difference in temperament of whites and Negroes which is the result of their different types of environment and feeling of responsibility for themselves and humanity as a whole may be responsible for the rejections of whites for this cause.

Our statistics show that 14,401 Negroes and 4,451 whites have been rejected at the local boards in Georgia because of lack of required amount of education. The requirement is that they must have the equivalent of a fourth grade education to be acceptable for training. The reason for barring registrants not having the equivalent of a fourth grade education at this time is that in order to organize a large fighting force as quickly as possible, it is necessary to accept for training only those registrants who possess sufficient intelligence to immediately grasp the meaning of orders and their execution so that they can be trained with the least possible delay. It is believed that at some future time after a sufficiently large force has been trained these registrants not having the equivalent of a fourth grade education will be called for training.

The total number of registrants in Georgia, white and colored, is 419,690. Of this number 47,560 signed their registration cards by marks. This is about 11 per cent of the total number registered. The total number of white registrants is 268,958 with 11,950 signing by mark or about 4 per cent of the whites who are unable to sign their names. The total number of Negroes registered is 150,732; 35,610 of these signed their registration cards by mark, or about 24 per cent of the total number of colored registrants. It is hard to believe that this deplorable condition exists right here in our State. Most of these registrants are illiterate because they have not had the

CAUSES FOR REJECTION OF SELECTIVE SERVICE REGISTRANTS AT ARMY INDUCTION STATIONS

	Dec. '40 to Mar. '41	April	May	June	July
Dental	14%	9.7%	9.2%	12%	8.7%
Venereal Diseases	13.2%	15%	18.8%	9%	15.6%
Genito-Urinary Diseases	6.3%	4.4%	6.2%	5%	2.6%
Hernia	7.4%	6.8%	6.8%	8%	10.2%
Heart and Blood Vessels	12.6%	12.6%	11.5%	8%	11.6%
Eyes	12.2%	6.2%	8.8%	5%	2.8%
Musculo-Skeletal	9.2%	17.4%	11.5%	9%	8.3%
Nervous and Mental (including lack of education)	4.3%	11.6%	10%	32.8%	36.19%
Lungs	4.6%	5.8%	5.4%	13%	8.3%

SELECTIVE SERVICE SYSTEM
GEORGIA
SEPTEMBER, 1940, THROUGH SEPTEMBER 15, 1941
ILLITERACY

	White	Colored	Both
Total No. of Registrants	268,958	150,732	419,690
No. Who Signed Registration Cards by "X"	11,950—4%	35,610—24%	47,560—11%
No. Cl. 1V-F by L. B. for Lack of Education	4,451	14,401	18,852
No. Rejected by Army for Lack of Education	243	236	479

SELECTIVE SERVICE SYSTEM
GEORGIA
SEPTEMBER, 1940, THROUGH JUNE, 1941
PHYSICAL AND MENTAL

	White	Colored	Both
Total No. of Registrants	257,159	143,921	401,080
No. Examined by L. B.	26,394	17,511	43,905
No. Cl. I-A by L. B.	16,236—61%	9,228—53%	25,464—58%
No. Cl. I-B by L. B.	4,984—19%	4,824—27%	9,808—22%
No. Cl. IV-F by L. B.	5,174—20%	3,459—20%	8,633—20%
No. Rejected by L. B. (1-B & IV-F)	10,158—39%	8,283—47%	18,441—42%
No. Cl. IV-F by L. B. (Obvious Mental and Physical Defects)	2,917—1%	2,828—1.9%	5,745—1.3%

A RURAL COUNTY IN GEORGIA
POPULATION 9,345
FIGURES AS OF JUNE 30, 1941

	White	Colored	Both
No. Registrants in County	530	473	1,003
No. Cl. III-A (marriage-dependents)	408	344	752
No. Physically Ex. by L. B.	52	76	128
No. Cl. I-A by L. B.	37—71%	54—71%	91—71%
No. Cl. I-B by L. B.	9—17%	18—24%	27—21%
No. Cl. IV-F by L. B.	6—12%	4— 5%	10— 8%
Stations	20	29	49
No. Inducted into Army	17—85%	19—66%	36—73%
No. Rejected by Army	3—15%	10—34%	18—27%
No. Registrants Sept. 15, 1941	555	497	1,052
No. Signed Registration Cards by "X"	15— 3%	159—32%	174—17%

A RURAL COUNTY IN GEORGIA HAVING NO NEGRO POPULATION—POPULATION 3,502
FIGURES AS OF JUNE 30, 1941

	White	Colored	Both
No. of Registrants in County	546	0	546
No. Cl. III-A (marriage-dependents)	378	0	378
No. Physically Ex. by L. B.	40	0	40
No. Cl. I-A by L. B.	28—70%	0	28—70%
No. Cl. I-B by L. B.	6—15%	0	6—15%
No. Cl. IV-F by L. B.	6—15%	0	6—15%
No. Sent to Induction Stations	21	0	21
No. Inducted into Army	14—67%	0	14—67%
No. Rejected by Army	7—33%	0	7—33%
No. Registrants Sept. 15, 1941	581	0	581
No. Signed Registration Cards by "X"	78—13%	0	78—13%

CHATHAM COUNTY
POPULATION 105,431
FIGURES AS OF JUNE 30, 1941

	White	Colored	Both
No. of Registrants in County	8,901	8,249	17,150
No. Cl. III-A (marriage-dependents)	5,029	3,341	8,370
No. Physically Ex. by L. B.	2,700	2,041	4,741
No. Cl. I-A by L. B.	2,180—81%	1,056—52%	3,236—68%
No. Cl. I-B by L. B.	287—11%	507—25%	794—17%
No. Cl. IV-F by L. B.	233— 8%	478—23%	711—15%
No. Sent to Induction Stations	339	265	604
No. Inducted into Army	273—81%	169—64%	442—73%
No. Rejected by Army	66—19%	96—36%	162—27%
No. Registrants Sept. 15, 1941	9,342	8,519	17,861
No. Signed Registration Cards by "X"	112—1.2%	1,115—13%	1,227— 7%

opportunity of securing an education or, if the opportunity existed, they have in some way been denied the privilege of availing themselves of the opportunity. But there are some who had the opportunity and refused to exert themselves sufficiently to acquire even an elementary education.

Recently two changes of major importance have been authorized. Both offer hope

FULTON COUNTY
POPULATION 335,220

FIGURES AS OF JUNE 30, 1941

	White	Colored	Both
No. of Registrants in County	37,617	22,080	59,697
No. Cl. III-A (marriage-dependents)	21,593	9,433	31,026
No. Physically Ex. by L. B.	3,342	2,145	5,487
No. Cl. I-A by L. B.	1,879—56%	808—38%	2,687—49%
No. Cl. I-B by L. B.	785—24%	965—45%	1,750—31%
No. Cl. IV-F by L. B.	678—20%	372—17%	1,050—20%
No. Sent to Induction Stations	1,217	789	2,006
No. Inducted into Army	1,022—84%	556—70%	1,578—79%
No. Rejected by Army	195—16%	233—30%	428—21%
No. Registrants Sept. 15, 1941	39,345	22,973	62,318
No. Signed Registration Cards by "X"	394— 1%	1,733— 8%	2,127—3.4%

SELECTIVE SERVICE SYSTEM
GEORGIA

CONSOLIDATED REPORT OF INDUCTION
AS OF OCTOBER 1, 1941

	White	Colored	Both
No. Delivered	12,304	7,529	19,833
No. Inducted	9,915	5,438	15,353
No. Rejected	2,389—19%	2,091—28%	4,480—23%
No. Failed to Report	260	133	393

these men will be placed on regular duty. Second, there are about 200,000 men in I-B classification in the United States, 9,808 of whom are in Georgia. A large percentage of these men (probably 85 per cent) would be in Class I-A but for minor remediable defects. The government now proposes to have these defects corrected at

REJECTIONS, SELECTIVE SERVICE REGISTRANTS AT INDUCTION STATION
FOURTH CORPS AREA
JUNE, 1941

	TOTAL EXAMINED W	TOTAL EXAMINED C	*REJECTIONS OTHER THAN PHYSICAL W	*REJECTIONS OTHER THAN PHYSICAL C	DIFFERENCE W	DIFFERENCE C	REJECTIONS PHYSICAL W	REJECTIONS PHYSICAL C	PER CENT REJECTIONS PHYSICAL W	PER CENT REJECTIONS PHYSICAL C
Alabama	2,224	532	0	1	2,224	531	222	57	10.0	10.7
Louisiana	1,674	680	17	5	1,657	675	153	109	9.2	16.1
N. Carolina	1,707	386	0	0	1,707	386	166	60	9.7	15.5
S. Carolina	1,456	374	3	0	1,453	374	271	114	18.7	30.5
Tennessee	2,148	272	0	0	2,148	272	152	39	7.1	14.3
Georgia	2,504	933	0	14	2,504	919	525	185	21.0	20.1
Florida	1,581	259	0	0	1,581	259	366	83	23.1	32.0
Mississippi	1,355	426	63	57	1,292	369	221	68	17.1	18.4
Total	14,649	3,862	83	77	14,566	3,785	2,076	715	14.3	18.9

*REJECTIONS OTHER THAN PHYSICAL

	ILLITERACY W	ILLITERACY C	NO SEROLOGY REPORT W	NO SEROLOGY REPORT C	SPINA BIFIDA W	SPINA BIFIDA C	UNDERAGE W	UNDERAGE C	TEMPORARY INCAPACITY W	TEMPORARY INCAPACITY C	TOTAL OTHER CAUSES W	TOTAL OTHER CAUSES C
Alabama								1				
Louisiana	15	49			1					1		
N. Carolina												
S. Carolina			5	3								
Tennessee												
Georgia		26			1	1						
Florida	1	3										
Mississippi					1							
Total	16	78	5	3	3	1		1		1	24	84

for improvement in the physical condition of those affected. First, in so far as is practicable, men with acute gonorrhea without complications and who are otherwise qualified for I-A classification by the Army pre-induction examination will be accepted by the Army and treated. When cured, government expense, the necessary treatment to be given, if possible, by physicians and dentists in the locality in which the registrant resides.

Some interesting figures are shown when a comparative study is made of rural counties and those largely urban. For illustra-

SELECTIVE SERVICE SYSTEM

COMPARATIVE STUDY OF TWO RURAL AND TWO URBAN COUNTIES IN GEORGIA

	MIDDLE GEORGIA			NORTH GEORGIA			SOUTH GEORGIA			MIDDLE GEORGIA		
	W	C	Both	W	C	Both	W	C	Both	W	C	Both
% Cl. I-A by L. B. on physical examination	71%	71%	**71%**	70%	0	**70%**	81%	52%	**68%**	56%	38%	**49%**
% Cl. I-B by L. B. on physical examination	17%	24%	**21%**	15%	0	**15%**	11%	25%	**17%**	24%	45%	**31%**
% Cl. IV-F by L. B. on physical examination	12%	5%	**8%**	15%	0	**15%**	8%	23%	**15%**	20%	17%	**20%**
% of registrants tendered for induction actually inducted	85%	66%	**73%**	67%	0	**67%**	81%	64%	**73%**	84%	70%	**79%**
% of registrants tendered for induction rejected	15%	34%	**27%**	33%	0	**33%**	19%	36%	**27%**	16%	30%	**21%**
% of registrants who signed registration cards by "X"	3%	32%	**17%**	13%	0	**13%**	1.2%	13%	**7%**	1%	8%	**3.4%**

tion, two counties principally agricultural (one in North Georgia and one in Middle Georgia), and two counties principally city (one in North Georgia and one in South Georgia) were selected.

The preponderance of illiteracy in the rural counties is especially noticeable.

In conclusion, if we eliminate the rejections for venereal diseases and those for lack of sufficient education and certain anatomical abnormalities, we see that the remaining principal causes for rejection are conditions which are attributable in large measure if not almost entirely to insufficient or improper diet.

USE X-RAYS IN DIAGNOSING "BENDS"

Evidence that the diagnosis of the "bends," an occupational hazard of divers and tunnel workers, can be supported by x-ray pictures is presented by J. O. Gordon, M.D., and C. H. Heacock, M.D., Memphis, Tenn., in *The Journal of the American Medical Association* for Feb. 17.

The "bends," characterized by severe pain in the abdomen and knees, occur when a worker who has been subjected to an unusual amount of air pressure comes up to the surface too speedily, thereby making possible the formation of bubbles in the body tissues from nitrogen absorbed in breathing compressed air.

The case reported by the authors is that of a tunnel worker who because of injuries was not adequately "decompressed" before being taken to the hospital. In the hospital x-rays of his knees were taken and bubbles of gas were seen on the pictures. These bubbles were absorbed, which was also revealed by x-ray study. No permanent injury to the joints results.

The Tennessee men believe that this is the first case reported in which the diagnosis of the "bends" was supported by x-ray study.

CORONARY THROMBOSIS

Report of a Study of Fifty-Five Cases

EVERT A. BANCKER, JR., M. D.
Atlanta

Physicians practicing during the past twenty years must have noticed the slow but steady increase in the number of cases of coronary thrombosis along with other syndromes partly based on arteriosclerosis such as hypertension and angina pectoris[1,2]. The etiology of coronary thrombosis, like that of arteriosclerosis, remains obscure.

The chief reason for the increase in incidence of this so-called degenerative disease is our increased span of life, which insures a greater number of persons reaching sixty or more years of age when coronary thrombosis is most common. Poor cardiovascular heredity bears a direct relationship to the development of the disease in many patients. In a study of 255 case reports of coronary thrombosis Blumer[3], found that in 18 per cent there was a definite history of coronary disease in relatives. A study of the sex incidence shows that four times as many men as women suffer this disease. It is claimed that coronary thrombosis in women usually occurs in the presence of hypertension or diabetes[4]. Per-

Read before the Medical Association of Georgia, Macon, May 16, 1941.

sons suffering with diabetes frequently develop coronary thrombosis, probably because of the high incidence of arteriosclerosis in diabetes[5].

When syphilis affects the coronary arteries it is usually in a limited area at their ostia, but it occasionally produces a diffuse arteritis affecting the larger or the smaller coronary branches[6,7]. Although the excessive use of tobacco has not been proved to bear a direct relationship to the incidence of this disease, I believe that it does play an important etiologic role in those cases developing before the age of fifty. In 1934 White and Sharber stated that the incidence of coronary heart disease was higher in nonsmokers than in smokers. A recent study by English et al[8] revealed that the incidence of smokers among 187 patients with coronary disease between the ages of 40 and 49 years was 80 per cent, as contrasted with 62 per cent smokers among 302 patients in the group without coronary disease. Coronary thrombosis is well known to occur as a complication of Buerger's disease or of gout. Other important predisposing factors are infection, mechanical strain, toxemia and abnormal endocrine function. I would like to suggest a predisposing cause which has been overlooked by other authors. That cause is worry. I realize that it is difficult to evaluate or prove exactly how worry affects the heart or the brain, but such a large percentage of my patients seem to have been suffering an exceptional emotional worry at the time of the original attack that I believe it is more than coincidental. Coronary thrombosis is rare in the tropics and in the Negro race where worry is practically non-existent[9].

Morphology and Pathology

It is now generally agreed that coronary thrombosis is found in 80 per cent of cases in the anterior descending branch of the left cononary artery. The probable reason for this selectivity is that there is more mechanical strain in the area supplied by this artery than in other portions of the heart. This theory is substantiated by Lewis[10], and by Whitten[11]. In most cases there is involvement of more than one artery or branch in the pathologic process. There has been considerable discussion in recent years of an abnormal cholesterol metabolism in the etiology of atherosclerosis which precedes calcification. It is true that atheromatous lesions can be produced in rabbits by use of a high cholesterol diet but this mechanism has not proved to function the same in man. Willius claims that women have a more efficient cholesterol metabolism than men, hence the greater incidence of coronary thrombosis in men.

Another arresting theory mentioned by Bean[12] is liability of "an increased thrombotic tendency" of the blood in coronary thrombosis. Examination of the occluded coronary artery at postmortem shows fibrotic narrowing, atheromatous deposits, white calcium plaques and sometimes fresh thrombus formation with or without a developed infarct. Acute myocardial infarction may be found without any acute morphologic change in the coronary arteries. The pathogenesis of this type of infarct is unknown. The majority of patients dying with coronary thrombosis were found to have enlarged hearts which were heavier than normal[13]. As was to be expected, patients who also had suffered hypertension had larger hearts than those who had no hypertension. Bean suggests that a systematic study of the coronary veins in these cases might help explain the mechanism of evolution of the infarct[12].

Symptoms and Signs

Very little has been added to the description of the symptoms of this disease since the classic work of Heberden in 1768[14]. In 1912 and again in 1918, Herrick reawakened clinical interest in the prevalence and varied manifestations of coronary thrombosis.[15,16]

The variation in the clinical types of coronary thrombosis depends upon the degree of coronary stenosis, the caliber and location of the artery occluded, the rapidity of the obstruction and the ability or disposition of the patient to stand pain. The clinical types may be divided into:

I—Cases with sudden complete occlusion of the main or an important coronary branch, resulting in myocardial infarction and (1) sudden death, or (2) sudden onset of severe anginal pain with shock and congestive failure, or, (3) sudden attack of acute dyspnea without pain but with gradual development of myocardial insufficiency caused by left ventricular failure.

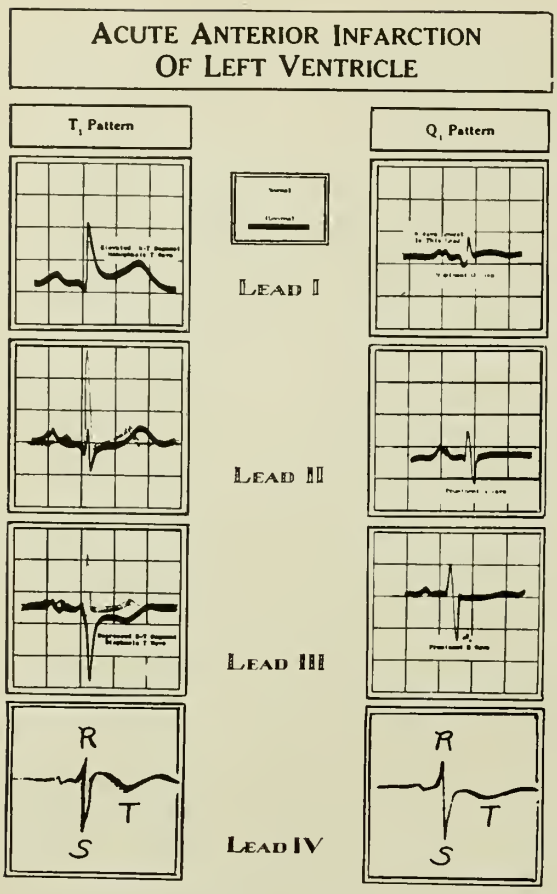


Figure 1—No. 2
Reproduction of drawing showing the early Q and T patterns in cases of acute anterior infarction of the ventricle.

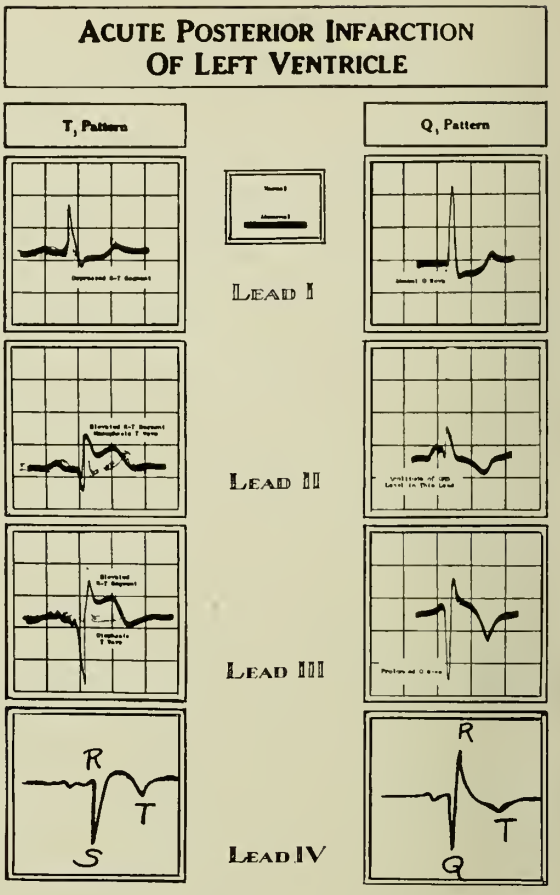


Figure 2—No. 3
Reproduction of drawing showing early Q and T patterns.

II—Cases with coronary sclerosis causing gradual stenosis and slowly developing myofibrosis, presenting the following manifestations: (1) paroxysmal attacks of angina pectoris, (2) varying degrees of left ventricular myocardial insufficiency, and (3) disturbances of rhythm, chiefly premature beats and auricular fibrillation and transient heart block and paroxysmal tachycardia.

A typical attack of acute coronary thrombosis is usually easily identified by the severe, prolonged lower substernal pain which may radiate into the arm, shoulder, or neck. The electrocardiographic changes, fall in blood pressure, increased sedimentation rate, leukocytosis, fever and pericardial friction rub make the diagnosis certain.

Other diseases of importance which at times are difficult to differentiate from coronary occlusion are pulmonary embolism, pleurisy, pericarditis, dissecting aneurysm, rupture of aorta into pericardial sac, herpes zoster, tabes with gastric crises, arthritis of shoulder joint or rib articulations, and acute abdominal diseases such as perforating peptic ulcer, gallstones, acute pancreatitis and diaphragmatic hernia. Willius states that 10 per cent of the cases of diaphragmatic hernia encountered at the Mayo Clinic are previously diagnosed as heart disease.[18]

Electrocardiographic Changes

The electrocardiographic changes in acute coronary thrombosis are so characteristic that they are practically diagnostic in 99 per cent of cases. If serial tracings are made the presence of the lesion and its location are usually disclosed.

There are two common locations for coronary thrombosis from an electrocardiographic point of view. Anterior thrombosis with subsequent infarction is usually located near the apex of the left ventricle and is caused by a thrombus in the left coronary artery. Posterior infarction is located at the base of the left ventricle posteriorly and may involve the adjacent portion of the interventricular septum. It is due to a thrombus in the right coro-

nary artery which supplies this area and is represented in the electrocardiogram by changes the reverse of those found in anterior infarction. Anterior infarction is indicated in the electrocardiagram by the T_1 pattern or the Q_1 pattern. In the T_1 type of tracing the most characteristic changes are elevation of the R-T segment in lead one and depression of the S-T segment in lead three. There is also a low amplitude R wave in lead two and in lead four by the new method the Q wave is absent and the T wave is inverted or decidedly biphasic. These changes are only transitory and in from one to three weeks the R-T segments have come to rest on the iso-electric line and the T wave in lead one has become sharply negative.

Because of the close association of coronary occlusion with angina pectoris the following differential table of Brill[17] is presented:

Slide 1
DIFFERENTIAL DIAGNOSIS
(Brill)

	Angina Pectoris	*Acute Coronary Occlusion*
Character of pain	Same	Same
Provocative factor	Usually present	Usually absent
Location of pain	Upper or middle sternum	Lower part of sterum
Behavior	Immobile	Restless
Duration of pain	Minutes	Hours or days
Effect of nitrites	Relief	No relief, may be harmful
Nausea and vomiting	Absent	Usually present
Dyspnea	Usually absent	Usually present
Collapse	Usually absent	Usually present
Acceleration of pulse rate	Usually absent	Usually present
Blood pressure	Usually slight rise	Usually falls
Fever and leukocytosis	Absent	Present
Sedimentation rate	Normal	Increased
Electrocardiographic changes	May be absent	Usually characteristic
Pulmonary edema	Absent	May be present
Pericardial friction rub	Absent	May be present
Embolic phenomena	Absent	May be present

The Q_1 type is characterized by a well developed, broadened Q wave and a low amplitude R wave in lead one, the absence of Q and the presence of deep S waves in leads two and three and an inverted T wave in lead four. Posterior infarction is indicated by the T_3 or the Q_3 pattern. In the T_3 type the S-T segment in lead one is depressed and the R-T segments in leads two and three are elevated. Lead four by the new method may show a depressed S-T segment and a shallow upright T wave. In from two to four weeks the R-T segments return to the base line and the T waves in leads two and three become deeply inverted forming the "cove plane" T wave of Pardee. The Q_3 pattern is characterized by an absent Q wave in lead one and a prominent Q wave in leads two and three. There is also usually low amplitude R wave in lead two. The T_4 wave may be shallow and upright. The great value of the thoracic leads in the diagnosis of acute myocardial infarction has been established. In certain cases the abnormal wave changes may appear in those leads before they appear in the standard leads and may be more typical at a given stage after infarction. Only in very rare instances are the significant wave changes of acute infarction seen only in the thoracic lead. Conversely, lead four may not show any abnormality and the standard leads may have all of the diagnostic changes if the tracings are made during the first three days after infarction of the posterior basal portion of the left ventricle.

Coronary sclerosis without thrombosis usually produces abnormal electrocardiographic waves which are not characteristic enough to be diagnostic. It must be admitted that rarely a normal electrocardiogram may result even when the patient was found to have advanced disease of the coro-

nary arteries.

Pericardial Friction Rub

Although the pericardial friction rub is a valuable diagnostic sign if present, coronary thrombosis should not be excluded by its absence. It is usually heard only in anterior infarcts and appears within the first few days of illness and rarely lasts longer than one week. It is heard best near the apex area and varies in intensity and pitch. It has no value as a prognostic sign.

Antecedent Retrosternal Pain

Feit[19], Eliaser[20], Levine[4], and others have called attention to a mild recurrent retrosternal pain which many patients experience for two or three days before the actual thrombosis occurs. The most probable cause of this pain is a gradually forming thrombus in an already stenosed coronary artery.

It is a debatable question whether strict bed rest instituted on the appearance of this pain would have any influence upon the subsequent development of the occlusion.

Embolic Phenomena

In 1806, Corvisart[21] described the appearance of intraventricular mural thrombi but was not aware of their etiology because the pathologic changes of infarction were unknown. Varying figures are given by different authors as to the frequency of mural thrombosis. The results of averaging several series of cases reported indicate that mural thrombosis occurs in about 45 per cent of cases but in most instances organization takes place without serious results. Infarction and mural thrombosis occur more frequently in the left ventricle and therefore emboli are more common in the systemic than in the pulmonary circulation.

Medical Treatment

For the average case of coronary thrombosis in the acute stage absolute bed rest and the free use of morphine are of paramount importance. In the presence of pulmonary edema or repeated vomiting, atropine sulphate may be used with the morphine to advantage. High concentrations of oxygen should be administered during the first few days of the disease if there are cyanosis, dyspnea, insomnia, apprehension or severe pain unrelieved by morphine. Concentrations of oxygen from 90 to 100 per cent may be obtained by the use of the improved face mask which can be applied by the patient himself when he feels the need of it. If a face mask is not available an oxygen tent may be used in which a concentration of from 40 to 60 per cent only is possible. The nasal catheter method of oxygen administration or the placing of the patient's bed by an open window is strongly advised if the above mentioned methods are not obtainable.

A liquid diet only should be allowed during the first week unless there is vomiting when it may be necessary to withhold food entirely for several hours and repeatedly inject intravenously 50 to 100 cc. of a 50 per cent glucose solution. Intravenous glucose furnishes direct nutrition to the heart muscle, increases coronary circulation[22], and improves renal function. After the first week a soft diet may be allowed if the condition of the patient is favorable. At the end of the second week a general diet will be beneficial if the total calories are limited between 1000 and 1200 per day for the remainder of the two months of convalescence.

The bowels should be left alone for the first three days when mineral oil may be given by mouth and a low oil enema used if necessary.

Digitalis should be used with caution. If congestive failure with increased systemic venous pressure prevails, digitalis should be used. If either shock or peripheral circulatory failure with low venous pressure is present digitalis is contraindicated. The nitrites are contraindicated not because of any hypotensive influence but because their action is short and it is claimed that their use tends to increase the size of the infarct[23]. If congestive failure persists I strongly favor the use of a mercurial diuretic and adequate acidifying doses of ammonium chloride along with digitalis.

The value of aminophyllin in acute coronary thrombosis is still open to question. If taken by mouth in large doses (3 grains every 3 or 4 hours) it apparently exerts a beneficial action by dilating the coronary arteries. If given intravenously, Levy et al[24] have found that the effects last only

twenty minutes. Aminophyllin may be given trial in patients with persistent anginal pain following thrombosis.

The use of epinephrine in coronary thrombosis should be reserved for such emergencies as heart block, cardiac standstill or extreme shock. Although most arrhythmias found in coronary thrombosis are transient, paroxysmal ventricular tachycardia may persist and require the use of quinidine in 6 grain doses every four hours until the arrhythmia subsides.

Surgical Treatment

Surgery has no place in the treatment of acute coronary thrombosis but it does offer a ray of hope for patients who have recovered from the acute stage and who suffer cardiac pain which has failed to respond to medical treatment. The simplest surgical procedure is the paravertebral injection of alcohol into the upper dorsal sympathetic ganglia[25]. This method is safe and is effective in a high percentage of cases.

Total thyroidectomy and the grafting of tissues onto the myocardium are still in the experimental stage. The method of tissue grafting used by Beck[26] has resulted in the reduction of pain and increased tolerance for exercise.

Prognosis

The chances of recovery from coronary thrombosis are greater today than they were ten years ago. This has been brought about by earlier diagnosis, a more universal use of the electrocardiograph and consequently more efficient treatment.

Very low amplitude of the R and T waves in all electrocardiographic leads is an unfavorable sign. A constantly increasing sedimentation rate indicates a poor prognosis, while a decreasing rate is of good import[27]. The location of the infarct does not influence the prognosis appreciably. Myocardial insufficiency with the failure of both ventricles is a grave sign. The younger the patient the better the prognosis. Patients with no history of previous attacks and with favorable electrocardiographic signs have a better chance of recovery.

Report of Cases

This report deals with a study of fifty-five cases of coronary thrombosis in white patients extending over a period of ten years. The detailed information is summarized in the form of tables.

The mortality rate was 38 per cent. The ratio of male to female patients was approximately six to one. There was a history of coronary thrombosis in other members of the family in 25 per cent of cases. Sixty-five per cent of the thirty-four patients who are still alive are able to earn a living (Table 1).

Sixty-eight per cent of cases occurred between the ages of fifty and seventy (Table 2). Twenty-three per cent of the patients died as a result of the first attack while 67 per cent lived from six months to five years, and 10 per cent lived over five years (Table 3). Thrombosis in the posterior surface of the left ventricle was found in 51 per cent of the patients, which is contrary to the findings of many writers upon this subject (Table 4).

A definite hypotension was present in 72 per cent of cases (Table 5). In a study of possible etiologic sequelae it is noteworthy that a marked general arteriosclerosis was present in 43 per cent of cases and a long standing focal infection was the only extracardiac pathologic finding of significance in 20 per cent of cases (Table 6). The disease occurred most often in salesmen while 29 per cent of cases occurred in laborers and 20 per cent of cases were found in executives (Table 7).

Summary

1. There has been a considerable increase in the incidence of coronary thrombosis during the last twenty years, probably because of the increased span of human life.
2. The excessive use of tobacco before the age of fifty is believed to be a factor in the development of coronary spasm and thrombosis.
3. The importance of long continued worry and of co-existing focal infection has been underestimated.
4. Coronary thrombosis may be found without myocardial infarction and infarction may be seen without any evidence of thrombosis.
5. In the fifty-five cases reported, posterior thrombosis outnumbered anterior thrombosis by one.
6. The mortality rate was 38 per cent.

Table 1—General Statistics

Male patients	47 or 85%
Female patients	8 or 15%
Dead	21 or 38%
Alive	34 or 62%
Active	22 or 65%
Retired	12 or 35%
Pos. Family Hist.	14 or 25%
Neg. Family Hist.	37 or 67%
Unknown Hist.	4 or 7%

Friction Rub	17 or 31%
Arrhythmia	9 or 16%

TABLE II—AGE INCIDENCE

20-30 years	1 or 2%
30-40 years	4 or 8%
40-50 years	9 or 16%
50-60 years	15 or 27%
60-70 years	23 or 41%
70-80 years	2 or 4%
80-90 years	1 or 2%

TABLE III—LENGTH OF LIFE AFTER ATTACK

Less than one week	4 or 8%
Less than two weeks	3 or 5%
About one month	6 or 10%
One to six months	3 or 5%
Six months to one year	10 or 18%
One to three years	12 or 22%
Three to five years	12 or 22%
Five to ten years	4 or 8%
Over ten years	1 or 2%

TABLE IV—ELECTROCARDIOGRAPHIC LOCALIZATION

Anterior thrombosis	26 or 49%
Posterior thrombosis	27 or 51%
Ant. and Post.	1 or 2%
No Electrocardiogram	1 or 2%

TABLE V—SYSTOLIC BLOOD PRESSURE DURING ATTACK

60 mm. Hg.	1 case	120 mm. Hg.	5 cases
70 mm. Hg.	0 case	130 mm. Hg.	3 cases
80 mm. Hg.	8 cases	140 mm. Hg.	5 cases
90 mm. Hg.	6 cases	150 mm. Hg.	1 case
100 mm. Hg.	15 cases	160 mm. Hg.	0 cases
110 mm. Hg.	10 cases	Unknown mm. Hg.	1 case

TABLE VI—POSSIBLE ETIOLOGIC SEQUELAE

General arteriosclerosis	24 or 43%
Arteriosclerosis and diabetes	1 or 2%
Arteriosclerosis and pernicious anemia	1 or 2%
Arteriosclerosis and focal infection	3 or 5%
Arteriosclerosis and obesity	2 or 4%
Focal infection alone	11 or 20%
Obesity alone	4 or 8%
Syphilis	2 or 4%
Worry	1 or 2%
Undetermined	6 or 10%

TABLE VII—OCCUPATION

Salesman	20 or 36%
Laborers	16 or 29%
Executives	11 or 20%
Housewives	7 or 13%
Professional	1 or 2%

BIBLIOGRAPHY

1. White, P. D.: The Diagnosis and Medical Treatment of Angina Pectoris, Ann. Int. Med. 7:218-228, 1933.
2. Denny, F. P.: Increase in Coronary Disease and Its Cause, New England J. Med. 214:769-773, 1936.
3. Blumer, George: Some Subsidiary Factors Associated with Coronary Occlusion, M. Times, New York 67:53-55, 1939.
4. Levine, S. A.: Clinical Heart Disease, Philadelphia and London, W. B. Saunders Company, 1936.
5. Levine, S. A.: Coronary Thrombosis: Its Various Clinical Features, Medicine, 8:245-418, 1929.
6. Maher, C. C.: Microscopic Pathology of Cardiac Syphilis, Am. Heart J. 6:37-41, 1930.
7. Warthin, A. S.: The Role of Syphilis in the Etiology of Angina Pectoris, Coronary Arteriosclerosis and Thrombosis, and of Sudden Death, Am. Heart J. 6:163-170, 1930.
8. English, John P.: Willius, F. A., and Berkson, Joseph: Tobacco and Coronary Disease, J.A.M.A. 115:1327-1329 (Oct. 19) 1940.
9. Paullin, J. E.: The Incidence of Syphilitic Infection in Negroes and the Disability it Produces, Tr. A. Am. Physicians 42:46, 1927.
10. Lewis, T.: Diseases of the Heart, New York, The Macmillan Company, 1933.
11. Whitten, M. B.: The Relation of the Distribution and Structure of the Coronary Arteries to Myocardial Infarction, Arch. Int. Med. 65::383, 1930.
12. Bean, W. B.: Infarction of the Heart, III: Clinical Course and Morphological Findings, Ann. Int. Med. 12:71-92, 1938.
13. Parkinson, J., and Bedford, D. E.: Cardiac Infarction and Coronary Thrombosis, Lancet, 1:4, 1928.
14. Heberden, W.: Some Account of a Disorder of the Breast, Med. Trans. Royal College of Physicians, London, 1772, 2:59-67. (The original mention of angina pectoris was made by Heberden in a lecture before the Royal College of Physicians In London, July, 1768). Cited by White.
15. Herrick, J. B.: Clinical Features of Sudden Obstruction of the Coronary Arteries, J.A.M.A. 59:2015-2020, 1912.
16. Herrick, J. B.: Thrombosis of the Coronary Arteries, J.A.M.A. 72:387-390, 1919.
17. Brill, I. C.: Coronary Artery Disease and Angina Pectoris; the Present Status with a Review of Some of the Recent Literature, Ann. Int. Med. 12:365-383, 1938.
18. Willius, F. A.: A talk on Certain Less Common Diagnostic Pitfalls with Reference to Cardiac Diseases, Proc. Staff Meet. Mayo Clin. 14:488-490.
19. Feil, H.: Preliminary Pain in Coronary Thrombosis, Am. J. M. Sc. 213:42-48, 1937.
20. Sampson, J. J., and Eliaser, M., Jr.: The Diagnosis of Impending Acute Coronary Artery Occlusion, Am. Heart J. 13:675-686, 1937.
21. Corvisart, J. N.: Essai surles Maladies et les lesions organiques du coeur, Paris, 1806 (Gates Translation, 1812).
22. Ginsberg, A. M.; Stoland, O. O., and Loy, D. T.: Studies on Coronary Circulation: the Effect of Intravenous Injections of Dextrose on Coronary Circulation, Arch. Int. Med. 55:42-51, 1935.
23. Master, A. M.; Jaffe, H. L., and Dack, S.: The Treatment and the Immediate Prognosis of Coronary Artery Thrombosis (267 attacks), Am. Heart. J. 12:549-562, 1936.
24. Levy, R. L.: Bruenn, H. G., and Williams, N. E.: The Modifying Action of Certain Drugs (aminophyllin, nitrites, digitalis) Upon the Effects of Induced Anoxemia in Patients with Coronary Insufficiency, Am. Heart J. 19:639-652, 1940.
25. White, J. C.: Paravertebral Injections of Alcohol, Ganglionectomy and Posterior Rhizotomy for the Relief of Cardiac Pain. Levy, R. L., Editor: Diseases of the Coronary Arteries and Cardiac Pain, New York, Macmillan Company, P. 363-386, 1936.
26. Beck, C. S.: Coronary Sclerosis and Angina Pectoris: Treatment by Grafting a New Blood Supply Upon the Myocardium, Surg., Gynec., & Obst. 64:270-272, 1937.
27. Christensen, S.: Remarks on Sedimentation Reaction in Coronary Thrombosis, Ugesk, f. Laeger, Copenhagen, 1936, 118:221-224, Abstract, J.A.M.A. 106:2036, 1936.

DISCUSSION OF PAPER OF DR. EVERT A. BANCKER, JR.

Dr. H. C. Atkinson (Macon): Dr. Bancker has made a most thorough survey of this subject. for which I wish to commend him and express my appreciation. I am sorry that he did not have time to complete his paper. I am sure we will all read it when it is published in the State Medical Journal. His paper includes a study of clinical cases which the limitation of time has prevented his reporting. Such studies have been the main factor in adding knowledge of this condition during the past decade. This paper could not have been written ten years ago. It is hoped that studies of this

sort will reveal a great deal more in the next ten years than we now know.

There is one point which he brought up which I wish to strongly endorse and that is the importance of worry and nervous strain in conditions of this sort. I think we cannot overemphasize that point.

Another important point, generally recognized at the present time, is the importance of hereditary basis in determining who shall develop coronary occlusion and at what age.

One recommendation which I wish to make is that we not think of angina pectoris as a clear cut clinical entity or disease. I believe that it will add to our clarity of thinking if we think of angina pectoris as pain in the heart very much as we think of lumbago as pain in the back, and not fool ourselves into thinking that we are talking about a clear-cut clinical disease of which we understand the etiology in discussing angina pectoris.

Again I want to thank Dr. Bancker for his very helpful study of this disease.

Dr. Shelton P. Sanford (Savannah): I read Dr. Bancker's paper and listened to it again with a great deal of interest. I am in substantial agreement with most of the points in his essay and I think it is a distinct compliment to the medical profession that ten years ago coronary thrombosis was synonymous with sudden death but now we all know people who have suffered a major attack but have survived some five year or more.

Syphilis, I think, has played an insignificant role in this disease. In fact, to have coronary thrombosis almost gives a patient a clean bill of health as far as syphilis is concerned. In some of our counties the Negro population is almost completely syphilized, yet coronary thrombosis among them is very rare.

In the matter of treatment, one thing occurred to me. Nicotinic acid is a very valuable drug. Don't ask me how it acts. In this disease we are dealing with a myocardium which is receiving inadequate food and oxygen. Unless it has food to burn, it doesn't live, and we want to keep it alive. Nicotinic acid seems to facilitate oxidation in some way.

One thing Dr. Bancker mentioned was the age incidence. It has seemed to me from the few cases I have observed, if an attack comes at age 40 or thereabout, the first attack is usually fatal. However, if the first attack comes at age 60, the heart seems fortified against it and the attack seems to be less serious. There is a parallelism with cancer, it travels faster in young people and I think in young people that coronary attacks are frequently fatal the first time.

There is one other point that I think needs some caution. Oxygen, of course, is the best drug we have in this disease. We shouldn't pay too much attention to the pain. Morphine may be dangerous.

The object should be to get oxygen to the diseased tissue. If this can be done the pain will subside. The ampule business will also subside.

I think this is a very timely essay.

ACUTE COR PULMONALE

Report of Three Cases

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The clinical picture of pulmonary embolism is well known. The onset is sudden with dyspnea, substernal oppression, shock, ashen pallor, thready pulse, low blood pressure and cold sweat. Pain may occur later as a result of infarction. White[1] has given an excellent description of the condition. He lists the following predisposing conditions: fracture, operation, pregnancy, phlebitis, auricular fibrillation, chronic heart disease and myocardial infarction. Examination at times reveals an increased prominence and pulsation in the region of the second and third left intercostal spaces. There may be a systolic murmur at this area and the pulmonic second sound is usually accentuated. Gallop rhythm, distended and pulsating neck veins and cyanosis are not uncommon. Fever and leukocytosis may occur after an interval of twelve to twenty-four hours. The symptoms may subside quickly in the course of hours or last for days until death or recovery takes place.

The electrocardiographic changes following pulmonary embolism or massive pulmonary infarction as originally described by McGinn and White[2] [1] and later by Barnes[3] are: 1, prominent S wave and low origin of T in lead 1. ST segment starting slightly below the baseline; 2, gradual staircase ascent of ST interval from the S wave to T in lead 2; and 3, Q wave and definite late inversion of T wave (coronary type) in lead 3.

Love et al[4], after animal experiments, concluded that the electrocardiographic changes after pulmonary embolism were due to dilatation of the right ventricle. The changes that were most frequently noted were depression of the ST segment in one or more leads, more often in lead 2. Reversal of the T waves in lead 3 and the

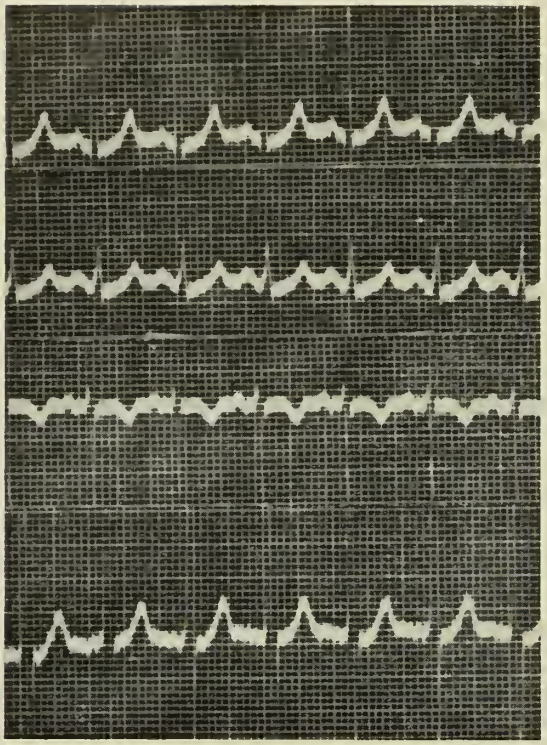


Fig. 1 (Case 1)—Note the slight depression of the ST segment in lead 2, late inversion of T_3 and inverted P_3.

precordial lead were not uncommon.

Durant, Ginsburg and Roesler[5] pointed out the occurrence of transient bundle branch block and stressed the fact that electrocardiograms should be taken within the first one to two hours after the onset of embolism. They demonstrated the transient character of the bundle branch block, by its disappearance five hours after an attack in one patient and twelve hours after an attack in two patients.

Recently Sokolow et al[6] studied the electrocardiograms of 50 cases of pulmonary embolism and found no constant abnormality. The McGinn-White type of change occurred in 10 per cent. More frequently there were ST deviations, particularly depression in lead 1 and inversion of the T waves in leads 3 and CF-2. They noted that these changes roughly simulate those of posterior infarction.

Death from pulmonary embolism has been ascribed to asphyxia, failure of the right heart or insufficient venous return to the heart. de Takats and Jesser[7] do not believe that these are the only factors and cite the fact that patients may die from a small embolus obstructing an insignificant

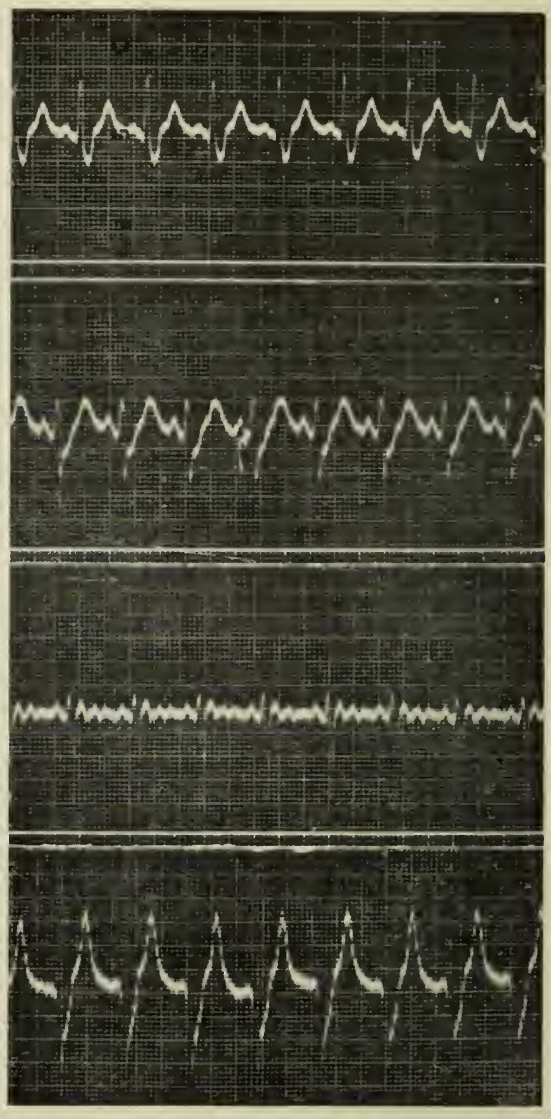


Fig. 2 (Case 2)—Shows right bundle branch block, deep S, depressed ST_2 with gradual staircase ascent, inverted T_3, Q wave in lead 4.

area of the lung. In animal experiments they have shown that when a fatal quantity of embolizing material is given dogs, 50 per cent of them may be saved if they receive atropine or the vagi be sectioned. These authors believe that a widespread radiation of autonomic reflexes occur during pulmonary embolism which may contribute to the cause of death by constriction of the coronary arteries. They quote the work of Friedberg and Horn[8], who reported 31 per cent of a large series of myocardial infarctions without any coronary occlusion. Twelve cases were in association with pulmonary embolism. Thus de Takats and Jesser advocate the intravenous administra-

tion of papaverine grain 1/2 and atropine grain 1/75 in cases of pulmonary embolism.

Report of Cases

Case 1. H. S., a Negro male, aged 39, was admitted to the hospital January 12, 1940, and died January 13, 1940. The patient had been well until about ten days prior to admission, at which time he noticed a painful swelling about the size of his thumb on the left side of his neck. This subsided somewhat after several days, but he developed an aching in the calf of his left leg followed by swelling of the left leg and later of the left thigh. During the next few days the swelling subsided but the aching remained. About thirty-six hours prior to admission the patient was awakened by a sharp pain over the left lower chest. There was no radiation but the pain was exaggerated by inspiration. Dyspnea appeared at the same time and persisted until admission. There was no cough but some fever. The temperature was 103° F. The pulse was 110 and the respirations were 46. The blood pressure was 130/100. The patient was in acute respiratory distress and complained of pain in the left chest and left leg. The left external jugular vein was hard and cord-like for a distance of about 5 cm.; it was not tender. There was limitation of the left chest. The percussion note was impaired over the left lower lobe of the lung posteriorly and the breath sounds here were tubular in quality. Many crepitant rales were heard over the same area. The heart was normal. The left great saphenous vein was palpable and slightly tender.

The patient continued to complain of pain after receiving repeated doses of morphine. About ten hours after admission he developed profound shock and shortly afterwards died.

There was a leukocytosis of 16,000 with 75 per cent polymorphonuclear cells and 25 per cent lymphocytes. The red count was 3.9 million and the hemoglobin was 11 grams. The sedimentation rate was 42 mm. at the end of one hour (Westergren method).

At autopsy there was a thrombophlebitis of the left external jugular and great saphenous veins. There was a massive embolism involving the primary branches of the pulmonary artery, which were completely occluded. There was an infarction of the left lower lobe with an old small embolism occluding the main artery to this lobe. A fibrinous exudate was present over the pleura in this area. There was a syphilitic aortitis, and mild granular contraction of the kidneys. The right ventricle was markedly dilated, while the left ventricle was firmly contracted.

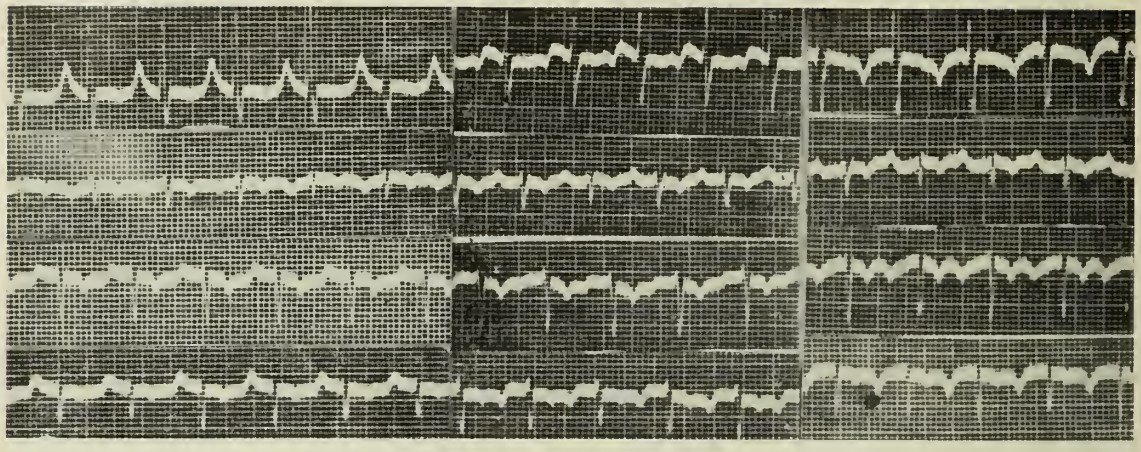
Case 2. L. K., a Negro male, aged 52, was admitted January 29, 1939, and died January 30, 1939. Six days prior to admission the patient had an attack of syncope. This was followed by a dull aching over the right lower chest. After two days the pain became sharp and cutting in character and caused marked dyspnea. The pain radiated from the right chest posteriorly to the right loin and was aggravated by respiration. He developed a hacking cough and became feverish. On the day prior to admission the pain and dyspnea increased in intensity and vomiting occurred several times.

The temperature was 99.2° F. The pulse was 114 and the respirations were 48. The blood pressure was 118/68. The patient was tossing restlessly about in bed in extreme respiratory distress and complaining of pain in the right chest. The mucous membranes of the pharynx were somewhat inflamed and dry. The teeth were carious; several had been removed. The expansion of the chest was limited bilaterally, but more on the right side. There was some hyperesthesia along the lower right chest both anteriorly and posteriorly. There were signs of consolidation over the right lower and middle lobes and over the left lower lobe of the lung. A loud friction rub was heard over the right lower chest anteriorly. Many medium moist rales and loud rhonchi were present over the whole chest. The apex impulse of the heart was felt in the fifth intercostal space 11 cm. to the left of the midsternal line. There was a presystolic gallop rhythm, and no murmurs were heard. The liver was enlarged about 3 fingers-breadth beneath the costal margin in the right midclavicular line. The edge was firm and regular. There was some tenderness to palpation in the right upper quadrant. The radial vessels exhibited a moderate degree of sclerosis. The remainder of the examination was essentially normal. The patient was given morphine and placed in an oxygen tent, but the respiratory distress continued and about twelve hours later death occurred.

The leukocyte count was 25,100 with 97 per cent polymorphonuclear cells and 3 per cent lymphocytes. The red count was 4.8 million with a hemoglobin of 10.3 grams (Sahli). The sedimentation rate was 105 mm. at the end of one hour (Westergren method). The Kahn was negative. An x-ray film of the chest revealed a partial consolidation of both lower lobes of the lung. The heart was moderately enlarged to the left.

At autopsy there were pneumonic changes involving the right lung in the stage of grey hepatization, and in the left lung in the stage of red hepatization. A bilateral fibrinous pleuritis was present. There were several mural thrombi in the right auricle and the upper portion of the inferior vena cava. Multiple pulmonary emboli were present. There was a concentric myocardial hypertrophy and the right ventricle was markedly dilated. A moderate granular contraction of the kidneys was noted. A large antemortem clot was found astride the main branches of the pulmonary artery.

Case 3. D. H., a Negro woman, aged 42, was admitted on June 3, 1940, complaining of a dull aching in the substernal region. For a period of ten or eleven months she had noticed some edema of her feet and ankles in the evening. For several weeks she had tired easily but had had no dyspnea or precordial pain. On the day of admission, while walking down the street, she became extremely weak and began to sweat profusely. At the same time she experienced a dull aching in the substernal region which radiated towards her neck. She became dyspneic and had to sit down to catch her breath. She vomited one time and, although the pain subsided somewhat, it was severe enough to cause her to come to the emergency clinic.



A B C

Fig. 3. (Case 3). A. Electrocardiogram on day of admission showing slight elevation of ST_3 with late inversion of T_3. B. Tracing on third day showing slight depression of ST_1 and ST_2, late inversion of T_1 and sagging ST_4. C. Tracing on fifth day showing inverted T waves in leads 1, 2, and 4 with an upright T_3.

Physical examination revealed a well developed and well nourished woman whose skin was cold and clammy. The temperature was 99° F., the pulse 120, and the respirations 48. The blood pressure was 84/50. The mucous membranes were quite pale. The chest expanded well and there were a few crepitant rales at the right lung base. The apex thrust could not be felt. The heart was enlarged slightly to the left. The sounds were distant and of poor quality. There was a diastolic gallop rhythm present. A smooth, hard, regular mass could be felt arising from the pelvis and extending to the level of the umbilicus. There was a moderate pitting edema of both legs.

Diagnoses of coronary occlusion and fibroid tumor of the uterus were made. The patient was placed in an oxygen tent and given digitalis, morphine and coramine. During the next two days the blood pressure rose gradually to 130 and the patient appeared to improve, but she continued to complain of some dyspnea. On the third day a pleural friction rub was noted anteriorly in the left axilla. On the morning of the seventh hospital day, the patient complained of sudden increase in severity of the dyspnea and shortly died.

The red count was 3.8 million, the hemoglobin 9 grams (Sahli) and the white count 15,750 with 89 per cent polymorphonuclear cells and 11 per cent lymphocytes. The urine was cloudy and contained a trace of albumen. There were 3-4 pus cells per high power field.

Autopsy showed an organizing thrombus in the left pulmonary artery, a massive embolus in the main pulmonary artery, bilateral pleural effusion and fibrous pleuritis, an incomplete thrombosis of the inferior vena cava in the region of the ovarian vein, apparently the result of pressure from a very large fibroid tumor of the uterus, and some passive congestion of the liver, spleen and kidneys.

Comment

The electrocardiogram in Case 1 was taken about twenty hours after onset of symptoms. It presented changes similar to those previously described[4,6] with slight depression of the ST segment in lead 2 and late inversion of the T wave in lead 3. There was a slight sagging of the PR segment in lead 1 when judged by the preceding TP intervals. Unfortunately no electrocardiogram was obtained following the acute episode on the day of death.

The electrocardiogram in Case 2, taken shortly after admission, revealed the characteristic McGinn-White type of change with (1) right bundle branch block, depressed ST segment and staircase ascent in lead 1; (2) depressed ST in lead 4, with staircase ascent.

An electrocardiogram taken on the day of admission of the patient in Case 3 revealed an elevation of the ST segment in lead 3 with a late inversion of T_3. A second electrocardiogram was made two days later and revealed a slight S wave in lead 1 with a depression of the ST segments in leads 1 and 2. ST_3 was elevated and there was a late inversion of T_3. There was a slight depression of ST_4 with a diphasic T wave. Two days later the S in lead 1 had disappeared and there was a late inversion of the T waves in leads 1, 2, and 4. T_3 had become upright. A deep S wave was present in lead 4 in each electrocardiogram.

The electrocardiograms demonstrate the changes which may occur following massive pulmonary embolism. It is quite possible that a tracing of the McGinn-White type might have been obtained in Case 1 had it been possible to secure one earlier, or

following the final episode. It has been pointed out that a tracing similar to that of posterior infarction may be obtained[4,6], and it is important to differentiate the two since the prognosis, if survival occurs, varies greatly in the two conditions. Case 3 demonstrates how nearly the clinical and electrocardiographic picture of massive pulmonary embolism may simulate a coronary occlusion. The serial changes which occurred in the first two tracings suggested a posterior infarction. There was an absence of a Q wave, but this does not serve to differentiate the two conditions as it may at times be present as a result of a massive pulmonary embolism.

Summary

Three case reports of massive pulmonary embolism have been presented, with the electrocardiographic changes which occurred in each. Minimal changes were present in one tracing, the typical McGinn-White type of change was present in another, and in the other serial electrocardiograms simulated those seen in posterior myocardial infarction.

BIBLIOGRAPHY

1. White, Paul D.: The Acute Cor Pulmonale, Ann. Int. Med. 11:115, 1935.
2. McGinn, S., and White, P. D.: Acute Cor Pulmonale Resulting from Pulmonary Embolism, Its Clinical Recognition. J. A. M. A., 104:1473, 1935.
3. Barnes, A. R.: Diagnostic Electrocardiographic Changes Observed Following Acute Pulmonary Embolism, Proc. Staff Meet., Mayo Clin. 9:11, 1936.
4. Love, W. S., Jr.: Brugler, G. W., and Winslow, N.: Electrocardiographic Studies in Clinical and Experimental Pulmonary Embolization, Ann. Int. Med. 11:2109, 1938.
5. Durant, T. M.: Ginsburg, I. W., and Roesler, H.: Transient Bundle Branch Block and Other Electrocardiographic Changes in Pulmonary Embolism, Am. Heart J. 17:423, 1939.
6. Sokolow, M.: Katz, N. N., and Muscovitz, Alfred: The Electrocardiogram in Pulmonary Embolism, Am. Heart J. 19:166-184 (Feb.) 1940.
7. de Takats, Geza, and Jesser, Jos. H.: Pulmonary Embolism, J. A. M. A. 114:1415-1421 (April 13) 1940.
8. Friedberg, C. K., and Horn, H.: Acute Myocardial Infarction Not Due to Coronary Artery Occlusions, J. A. M. A. 12:1675 (April 29) 1939.
9. Golden, Sherman: Acute Cor Pulmonale, Report of Case Occurring Eleven Days Postpartum, Am. Teart J. 16: 20-4243 (Aug.) 1938.

OUTLOOK FOR BACTERIAL ENDOCARDITIS BECOMING MORE HOPEFUL

"Subacute bacterial endocarditis (inflammation of the lining of the heart) has for many years been considered practically incurable," *The Journal of the American Medical Association for* Sept. 30 says. "Perhaps the time has come to change the conventional view of this disease.

"The septic type of subacute bacterial endocarditis, almost invariably fatal, has become so familiar that the group of patients with a mild degree of infection in which there is a chance of recovery has been overlooked.

CLINICAL AND ROENTGENOLOGIC ASPECTS OF INTESTINAL OBSTRUCTION

Milford B. Hatcher, M.D.
Max Mass, M.D.
Macon

In the past the words "locked bowel" indicated a grave situation to laity and physician, and usually meant certain death; but with the advent of aseptic surgery much has been learned and used in the intelligent relief of the obstruction. There still remains no basis for over-optimism, for the hazards continue to be real.

There are two types of obstruction: simple obstruction, presenting mechanical or functional interference to the continuity of the bowel, and strangulation obstruction, which exhibits, in addition to a block in the bowel, interference with the blood supply. Briefly stated the chief differential points between the two types of obstruction are as follows: the patient with a simple block in the bowel does not exhibit marked tenderness or rigidity of the abdomen, although the usual findings of obstruction are present; however, point tenderness is present when the blockage is due to the attachment of an adhesive band to the anterior abdominal wall. In a strangulating obstruction the return flow of blood through the mesenteric veins is interfered with, infarctions develop, and a serosanguineous fluid escapes into the peritoneal cavity causing varying degrees of pain, tenderness and rigidity. If a considerable loop of gut becomes infarcted a tender mass may be felt by abdominal, pelvic or rectal examination.

Not infrequently in the early stages of any type of intestinal obstruction the physical findings are meager. Intestinal colic is the earliest and most reliable sign of mechanical intestinal obstruction. Fundamentally, mechanical obstruction without intestinal colic does not exist. In view of these facts the differentiation of intestinal colic from other types of abdominal pain assumes critical importance. Colic begins

Read before the Medical Association of Georgia, Macon, May 16, 1941.

suddenly, increases in severity, quickly reaches its maximum intensity and this is maintained from one to three minutes, then the pain decreases rapidly. After a varying time the peristaltic pain recurs. With these recurrent pains, noises may be heard over the abdomen with the stethoscope. This synchronous recurrence of pain and noise is encountered in no other condition.

Frequent and copious vomiting is characteristic of obstructions above the ileocecal valve and the vomitus is stercoraceous in character, whereas in obstructions below the ileocecal valve vomiting may be slight or absent and the vomitus consists of a simple admixture of gastric contents and bile.

With the passage of time fluid and gas accumulate in the obstructed segments and distention appears. Vomiting and pain continue and dehydration supervenes, and then the patient presents the appearance of late intestinal obstruction with sunken features, a rapid feeble pulse, and cold and livid extremities. In strangulating obstructions, especially if the segmental blood supply is constricted, shock occurs early before dehydration has developed. The strangulated segment of bowel weeps into the abdominal cavity causing peritoneal irritation with continual pain, tenderness and rigidity.

X-ray studies frequently render invaluable aid in the diagnosis of bowel obstruction. Gas is normally present throughout the entire intestinal tract, but is not normally visualized radiographically in the small intestine, except in infants under three years of age. The presence of intestinal obstruction may be inferred if gas is visualized in the small intestine or if the quantity seen in the large intestine is definitely greater than that normally encountered. Within four or five hours following obstruction, gaseous distention may be observed radiographically.

Mechanical and paralytic obstruction may be distinguished roentgenologically, but this is not without exception. Rarely does reflex ileus of a localized segment of bowel occur. In these unusual cases the absence of intestinal colic and peristaltic noises permit differentiation. The majority of patients with paralytic ileus exhibit on x-ray films distention of the entire intestinal tract from the cardiac sphincter to the rectum. This universal ileus is never encountered in mechanical obstruction.

Large and small bowel obstructions may be distinguished with a considerable degree of certainty by roentgen study. A number of factors indicate that the ileocecal sphincter converts a simple obstruction of the colon into a closed loop obstruction. It has been noted during operations, in which there was enormous distention of the colon; the terminal ileum is invariably not distended. Hence, in obstructions of the colon, radiographically abnormal amounts of gas are visualized in the large bowel and none is seen in the small bowel. In obstructions above the ileocecal valve gaseous distention of the small gut is visualized above the point of obstruction and no gas is seen in the small intestine below that point; normal or decreased amounts of gas are visualized in the large bowel.

It is obvious that in order to make these distinctions one must be able to recognize radiographically the difference between distended large and small bowels. Distended colon presents gas shadows at the lateral borders of the abdomen with their long axis vertical, with thick intestinal walls and visible haustral markings. Gas in the small intestine is characterized by its central location, the long axis of the shadow is usually transverse, and, when the loops are considerably dilated, the two intestinal walls separating adjacent loops are seen as a very thin narrow wall. The occurrence of a fairly thick wall separating greatly distended loops suggests the presence of fluid or exudate between them. The mucosal folds of Kerkring lend a feathery appearance. The numerous distended coils of small bowel, in the upright position, one above the other, produce the typical step-ladder appearance commonly seen.

Partial and complete obstructions of the large and small bowel can generally be distinguished roentgenologically provided the site of the obstruction is proximal to the splenic flexure of the colon. Beyond this point incomplete obstructions may simulate complete obstruction radiographically. Considerable distention of the small

bowel without the presence of visible gas in the colon, after a preliminary enema, indicates that the obstruction of the small bowel is complete. Distention of the small intestine, accompanied by the persistence of gas in the colon, identifies an incomplete obstruction of the small bowel. Similarly, in obstructions of the large bowel proximal to the splenic flexure, absence of gas shadows below the point of obstruction following a cleansing enema signifies complete obstruction, whereas the persistence of small or moderate quantities of gas below the distended segments following such an enema means that the obstruction has not yet become complete.

There is one other type of intestinal obstruction which deserves separate mention here. We refer to the local ileus occurring in certain patients with gangrenous appendicitis, with regional peritonitis, and in some cases of appendiceal abscess. These patients present a radiographic picture which, to the best of our knowledge, is seen in no other condition. Abnormal accumulations of gas are seen in the cecum and the ascending colon with visible gas in the terminal ileum. Later, if generalized peritonitis develops, as it frequently does, this picture is succeeded by the picture of complete paralytic ileus extended throughout the entire intestinal tract.

Under ordinary circumstances a single large scout film of the abdomen with the patient lying in the supine position will give all necessary information. Occasionally after careful study of this film one is still unable to decide definitely whether the distended segments are colon or small bowel and in these patients the administration of a thin mixture of barium by enema will decide. If the barium extends to the ileocecal junction the obstruction is obviously above that point; if the barium is arrested before it reaches the ileocecal junction one is dealing with a large bowel obstruction; the barium may be partially arrested before reaching the ileocecal junction, with a small quantity escaping into the distended segment, and this denotes a partial colon obstruction.

In conclusion, we wish to re-emphasize the significance of intestinal colic in the early diagnosis of mechanical obstruction; also we desire to stress the early occurrence of shock, abdominal tenderness, continuous pain and rigidity in strangulating obstructions and the late appearance or absence of these manifestations in simple obstructions. The type of obstruction, mechanical or adynamic, its location, and whether complete or partial, may be told from properly interpreted x-ray films. Localized peritonitis due to gangrenous appendicitis often produces a diagnostic x-ray picture.

REFERENCES

Wangensteen, Owen H.: Bowel Obstructions, London, Bailliere, Tindall and Cox.

DISCUSSION ON PAPER BY DRS. MILFORD B. HATCHER AND MAX MASS

Dr. C. W. Roberts, (Atlanta): Dr. Frank Boland scheduled to lead in the discussion of this paper, is absent because of an emergency call home. At his request and because of my interest in the clinical phases of this constantly recurring surgical problem you will permit me to offer a few brief comments.

It is often said of present-day medical meetings that essayists tend to stress the scientific aspects of medicine while neglecting the presentation of the more practical side. In a meeting such as ours criticism of this type implies hunger on the part of the rank and file of practicing physicians for information which they can readily comprehend and utilize in their work. We have heard a paper that to me is impressive because it draws attention to a few well known clinical points. In addition to a very illuminating demonstration of the value of the x-ray as a diagnostic aid in questionable abdominal emergencies, I note emphasis upon time honored signs and symptoms. This is as it should be—a correlation of scientific procedure with clinical medicine. For my part I commend the essayists for this approach because it presents material that can be used by men wherever they may be located. It so happens that in dealing with the subject of intestinal obstruction, unless the clinical symptoms are relied upon as sufficient, when promptly interpreted, to suggest the diagnosis, the patient will not be gotten to the surgeon early enough to offer maximum opportunity for favorable treatment. It is well known that the mortality in intestinal obstruction, as high as 50 per cent a few years ago, is still capable of marked reduction if the simple points Dr. Hatcher raises are known and applied. As he says, in mechanical obstruction we have a rhythmic type of pain —more suggestive of the pain that accompanies labor than is seen in other entity. This particular type of labor-like pain should provide a provisional diagnosis long before there is time to get roentgenologic aid. Many of us who practice in small communities, as much as we would like to have a roentgenogram—must depend upon our ability to reach decision through the interpretation of the language of disease.

You will remember that Cabot and later Moynihan undertook to teach us that many entities, including obstruction, present symptoms so positive that if the cautious physician will only listen a correct diagnosis can be made in perhaps 85 per cent of cases.

So I feel that Dr. Hatcher has again called attention to a common-place clinical approach, well known to all of us, but which unfortunately in this age of laboratory diagnosis, we fail to employ. We simply refuse to interpret the condition which the symptoms are undertaking to reveal to us.

The roentgenologist can be of very definite help in arriving at a positive diagnosis in atypical cases. But let me repeat—and I am sure Dr. Hatcher and Dr. Mass agree—that where the symptoms are clean cut and x-ray confirmation can only be had after dangerous delay we are faced with a problem in which it is justifiable to proceed without such diagnostic support.

Let me again congratulate the essayists for the practical presentation of an old but ever timely subject.

The place of the roentgenologist in clinical medicine is universally acclaimed. By this paper his value in obscure types of intestinal obstruction has been more securely established.

Dr. L. P. Holmes (Augusta): (Read by Dr. R. C. Pendergrass, Americus). The essayists are to be congratulated on bringing before this body a subject which is both timely and important. Although considerable study has been given to the diagnosis and treatment of intestinal obstruction, the mortality rate has changed very little in the last ten years, at least for acute obsruction.

If the patient is watched until obstipation and fecal vomiting occur the mortality will rise from 5 per cent in the early cases to over 50 per cent for advanced cases.

The roentgenologist should be of great assistance to the surgeon in the early and late case, in evaluating the type and degree of obstruction.

Although Schwartz in 1911, and Case in 1914, told us that gas in the small intestine meant stasis, these principles have not yet been utilized to their fullest extent.

The single film of the abdomen is the most important laboratory method available in the diagnosis of intestinal obstruction, and the diagnosis rests upon the recognition of large quantities of gas in the small bowel, or lack of continuity of the gas pattern of the large bowel.

The differentiating of the small bowel pattern from the large assumes, therefore, a major importance and although seemingly simple, at times becomes quite difficult.

The folds of Kerkring are pathognomonic of the small bowel, and unfortunately at times these folds are hard to recognize, especially if films are of poor technical quality.

Therefore the patient should always, if possible, be sent to the main laboratory rather than to depend on portable films made at the bedside. This is a very important point and cannot be overstressed.

Often several films are necessary in the prone, supine, vertical, and even lateral postures to bring out necessary points in the evaluation of intestinal obstruction.

In the aged individual with a very redundant colon it is frequently difficult to be sure about the localization of the gas pattern. Gas in the small bowel may accompany renal and gallbladder colic and is occasionally seen in aged and debilitated patients, but in these cases there is no distention and to make a diagnosis of obstructed bowel there must be distention.

Roentgenograms should be made before giving an enema or irrigating the colon first, because gas which was present may be expelled, and second, because the retained gas and fluid may give pseudo fluid levels in the colon which would be confusing.

Again I should like to compliment the speakers for a splendid presentation of a very important subject.

Dr. Max Mass: In conclusion, we wish to re-emphasize the significance of intestinal colic in the early diagnosis of mechanical obstruction; also we desire to stress the early occurrence of shock, abdominal tenderness, continuous pain and rigidity in strangulating obstructions and the late appearance or absence of these manifestations in simple obstructions. The type of obstruction, mechanical or adynamic, its location, and whether complete or partial, may be told from properly interpreted x-ray films. Localized peritonitis due to gangrenous appendicitis often produces a diagnostic x-ray picture.

I wish to render my thanks to Dr. Roberts for bringing home to all of us the rather commonplace occurrence of this condition and the necessity for bringing these obstructed cases before the radiologists.

I think Dr. Pendergrass brought out an important point which we neglected to mention, namely, that more than one film is invariably or in many instances necessary to establish an accurate diagnosis. The supine film alone will not, in most instances, make the diagnosis for us.

Finally, I am immensely pleased that a surgeon would deign to emphasize the importance of the radiograph in the diagnosis of the acute abdomen. I should like to say a few words about radiologic procedures in such cases. First, I wish to impress the importance of making a scout film in suspected intestinal obstruction with the patient in supine position to avoid distortion of gas pattern and the careful handling of perforated ulcer cases. In cases of acute appendicitis we have observed a rather characteristic gas pattern which has permitted a surprisingly high percentage of accurate diagnoses from purely objective radiographic observation. This finding is essentially one of local ileus in which small segments of gut about the iliac fossa are distended to include the ascending colon and terminal ileum. The pattern is bizarre and fits no other condition except perchance some other local inflammatory process in this region.

I wish to express my appreciation to Dr. Hatcher and to the Society for the privilege of commenting on this presentation and to Dr. Roberts and Dr. Pendergrass for their discussion.

THE PRESIDENT'S PAGE

SAVANNAH'S NEW "MUNICIPAL HEALTH CENTER"

The dedication of this new "Municipal Health Center" on Wednesday evening, March 25, 1942, marked an important mile post in Georgia's health program. In fact, it marked the beginning of a new epoch in health. For here, in a magnificent new building, will be housed all of the city's and county's health agencies—governmental and voluntary. It was organized and established by the amalgamation of three voluntary social service groups which had been doing magnificent, but independent and limited, work for many years. One of these, the Louisa Porter Home Board, gave to the city the grounds and properties on which the building stands. The contributions of the city and the enthusiasm of the member groups made possible the actual erection of the building. At present the center has twenty-four member and affiliated groups.

The new center is a concrete example of the recognition by the people of Savannah that public health is the concern of all the people. All agencies, by working together, can and will accomplish much more than would be possible by dissemination of efforts. May Georgia follow Savannah's example and establish many more health centers.

This issue of The Journal goes to press just a few days before our next annual convention in Augusta, April 28-May 1. Much has occurred since we last met. We are in a world war such as few of us ever dreamed possible. Our work and sacrifices thus far are mere nothings in comparison with what is to come. The Medical Association of Georgia will do its part — and gladly. In World War 1 more than half of our active members were in uniform and more than



half of those left were doing voluntary war work on the Selective Service Boards. More than 75 per cent of our county society secretaries were in active service. Consequently, at our first meeting after the war, our membership had dropped to 1,025.

We must not let this happen this time. If your county secretary is called to the colors designate another to do his work until he returns. We need a compact organization now as never before. Our problems during the war will increase. Our problems after the war may be colossal. Who knows the shape of things to come? We do know that only through organization, study and the performance of each day's work as it comes will we be able to face the future with any hope of preserving the "American way" of the practice of medicine.

To the members of the Association, the Committees, the Council and the other officers of the Association I extend my sincere thanks for your tolerance, helpfulness and support during this year of your indulgence. I commend to you your incoming President, Dr. James A. Redfearn, and wish for him and you a most successful year.

Allen H. Bunce, M.D.

THE JOURNAL
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MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia

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APRIL, 1942

SULFONAMIDE INSUFFLATIONS IN THE THERAPY OF TRICHOMONAS VAGINALIS VAGINITIS

A Preliminary Report

In 1920 De Lee[1] drew attention to the discovery by Donné of Paris in 1836 of a flagellate in vaginal secretions. That this flagellate is the cause of a vaginitis has recently met with much support because of the work of Trussel and Plass[2]. Pure cultures of trichomonas vaginalis were implanted into the vaginas of several women with reproduction of the clinical picture indicating that the local irritation and discharge were due to the protozoa. However, the histopathologic studies of Kessel and Gafford[3] seem to corroborate the suggestion of Hibbert and Falls[4] that some other bacteria are associated with this entity.

From time to time new forms of therapy are being recommended for the treatment of trichomonas vaginalis vaginitis because no one therapy is consistently successful. In the past few years the following preparations have been given extensive trials in our clinic: diodo-hydroxyquinoline[5], silver picrate[6], vioform[7], ozonide of olive oil[8], and hexylresorcinol[9]. Cures ranged from 50 to 85 per cent. The best results were obtained with silver picrate. Least satisfactory were the results obtained with hexylresorcinol[10]. Some patients, however, showed such remarkable refractiveness to chemotherapeutic procedures that the flagellates occasionally could be demonstrated in the vaginal secretions during therapy or soon after cessation of treatment. Recurrences were quite common.

We have on occasion observed that patients receiving some sulfonamide for pelvic inflammatory disease, cystitis, etc., have noted an improvement in the pruritus vulvae, due to an associated trichomonad infection. Recently we have begun to insufflate the vaginas of patients with trichomonas vaginalis vaginitis with a powder containing one part sulfathiazole to three parts of beta lactose. The beta lactose is not necessary; sulfathiazole powder as well as sodium sulfadiazine proved just as efficient. After drying the vagina with a pledget of cotton, the vagina is insufflated with about two drams of the powder. This is repeated daily for four days. In most cases, on the day following the first treatment there apparently is complete absence of motile flagellates in the vaginal secretion. The action is probably local for very little of the sulfathiazole is absorbed per vaginam. Blood sulfathiazole levels are quite low even by the fourth day and the amount present in the blood by the sixth or seventh day is negligible. Therefore, one need not fear toxic reactions from excessive absorption of sulfathiazole by this method of treatment. The remarkable results obtained with this mixture may be due to its action on certain commensal bacteria such as non-hemolytic streptococci. This organism has been incriminated by Hibbert[11], Hesseltine[12], and Hibbert and Falls[4] because of the frequency with which it is found in trichomonas vaginalis vaginitis. In vitro experiments show that the flagellates remain motile in a test tube containing vaginal secretions, normal saline and sulfathiazole for over 19 hours even though in the same patient the flagellates within the vagina lose their motility in 10-15 hours. Furthermore, in trichomoniasis complicated by a concurrent vaginal moniliasis, sulfonamides prove valueless in eradicating the trichomonads or the monilia. The preceding facts lend evidence to indicate that the action of the sulfonamides is on certain local susceptible commensal bacteria and not on the trichomonad per se.* In general, however, the results thus far obtained with sulfona-

The Sulfathiazole-Beta Lactose Powder used in this study was prepared by Winthrop Chemical Company. The sodium sulfadiazine was supplied by Lederle Laboratories.

Investigations in the diagnosis, histopathology and therapeusis of trichomoniasis have been assisted by grants in aid of research to the University of Georgia School of Medicine by John Wyeth and Bro., and by Sharp and Dohme, Inc.

From the University of Georgia School of Medicine, Augusta.

mide insufflations of the vagina, particularly when a mixture of sulfathiazole-beta lactose powder was used, have been so promising as to warrant this preliminary report.

Robert B. Greenblatt, M.D.

*Four patients in this series had trichomonads and concurrent moniliasis. Sulfathiazole powder proved valueless in therapy. Silver picrate insufflations proved successful in eradicating the trichomonads in three of the four and the concurrent moniliasis in two of these patients. It appears, therefore, that silver picrate acts directly on the flagellate and thus differs from the sulfonamides.

REFERENCES

1. De Lee, J. B.: Illinois M. J. 37:186, 1920.
2. Trussel, R. E., and Plass, E. D.: Am. J. Obst. & Gynec. 40:883, 1940.
3. Kessel. J. F., and Gafford, J. A.: Am. J. Obst. & Gynec. 39:1005, 1940.
4. Hibbert, G. F., and Falis, F. H.: Am. J. Obst. & Gynec. 36:219, 1938.
5. Floraquin (G. D. Searle and Co.)
6. Silver Picrate Suppositories and Powder (John Wyeth & Bro.)
7. Vioform (Ciba).
8. Sta-O-Gen (Latimer).
9. "Caprokol" Jelly (Sharp & Dohme).
10. McCall, E. F., and Greenblatt, R. B.: Urol. & Cutan. Rev. 45:418, 1941.
11. Hibbert, G. F.: Am. J. Obst. & Gynec. 25:465, 1933.
12. Hesseltine, H. C.: Am. J. Obst. & Gynec. 26:46, 1933.

RECOMMENDATIONS TO ALL PHYSICIANS WITH REFERENCE TO THE NATIONAL EMERGENCY

I. Medical Students

A. All students holding letters of acceptance from the Dean for admission to medical colleges and freshmen and sophomores of good academic standing in medical colleges should present letters or have letters presented for them by their deans to their local boards of the Selective Service System. This step is necessary in order to be considered for deferment in Class II-A as a medical student. If local boards classify such students in Class I-A, they should immediately notify their deans and if necessary exercise their rights of appeal to the Board of Appeals. If, after exhausting such rights of appeal, further consideration is necessary, request for further appeal may be made to the State Director and if necessary to the National Director of the Selective Service System. These officers have the power to take appeals to the President.

B. Those junior and senior students who are disqualified physically for commissions are to be recommended for deferment to local boards by their deans. These students should enroll with the Procurement and Assignment Service for other assignment.

C. All junior and senior students in good standing in medical schools, who have not done so, should apply immediately for commission in the Army or the Navy. This commission is in the grade of Second Lieutenant, Medical Administrative Corps of the Army of the United States, or Ensign H. V. (P) of the United States Navy Reserve, the choice as to Army or Navy being entirely voluntary. Applications for commission in the Army should he made to the Corps Area Surgeon of the Corps Area in which the applicant resides and applications for commission in the Navy should be made to the Commandant of the Naval District in which the applicant resides. Medical R.O.T.C. students should continue as before with a view of obtaining commissions as First Lieutenants, Medical Corps, upon graduation. Students who hold commissions, while the commissions are in force, come under the jurisdiction of the Army and Navy authorities and are not subject to induction under the Selective Service Act. The Army and Navy authorities will defer calling these officers to active duty until they have completed their medical education and at least 12 months of internship.

II. Recent Graduates

Upon successful completion of the medical college course, every individual holding commission as a Second Lieutenant, Medical Administrative Corps, Army of the United States, should make immediate application to the Adjutant General, United States Army, Washington, D. C., for appointment as First Lieutenant, Medical Corps, Army of the United States. Every individual holding commission as Ensign H. V. (P), U. S. Navy Reserve, should make immediate application to the Commandant of his Naval District for commission as Lieutenant (J.G.) Medical Corps Reserve, U. S. Navy. If appointment is desired in the grade of Lieutenant, (J.G.) in the regular Medical Corps of the U. S. Navy, application should be made to the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

III. Twelve Months' Interns

All interns should apply for a commission as First Lieutenant, Medical Corps, Army of the United States, or as Lieutenant (J.G.), United States Navy or Navy Reserve. Upon completion of 12 months internship, except in rare instances where the necessity of continuation as a member of the staff or as a resident can be defended by the institution, all who are physically fit may be required to enter military service. Those commissioned may then expect to enter military service in their professional capacity; as medical officers; those who failed to apply for commission are liable for military service under the Selective Service Acts.

IV. Hospital Staff Members

Interns with more than 12 months of internship, assistant residents, fellows, residents, junior staff members, and staff members under the age of 45, fall within the provisions of the Selective Service Acts which provide that all men between the ages of 20 and 45 are liable for military service. All such men holding Army commissions are subject to call at any time and only *temporary deferment* is possible, upon approval of the application made by the institution to the Adjutant General of the United States Army certifying that the individual is temporarily indispensable. All such men holding Naval Reserve commissions are subject to call at any time at the discretion of the Secretary of the Navy. Temporary deferments may be granted only upon approval of applications made to the Surgeon General of the Navy.

All men in this category who do not hold commissions should enroll with the Procurement and Assignment Service. The Procurement and Assignment Service under the Executive Order of the President is charged with the proper distribution of medical personnel for military, governmental, industrial, and civil agencies of the entire

country. All those so enrolled whose services have not been established as essential in their present capacities will be certified as available to the Army, Navy, governmental, industrial, or civil agencies requiring their services for the duration of the war.

V. All Physicians Under Forty-Five

All male physicians in this category are liable for military service and those who do not hold commissions are subject to induction under the Selective Service Acts. In order that their service may be utilized in a professional capacity as medical officers, they should be made available for service when needed. Wherever possible, their present positions in civil life should be filled or provisions made for filling their positions, by those who are (a) over 45, (b) physicians under 45 who are physically disqualified for military service, (c) women physicians, and (d) instructors and those engaged in research who do not possess an M.D. degree whose utilization would make available a physician for military service.

Every physician in this age group will be asked to enroll at an early date with the Procurement and Assignment Service. He will be certified for a position commensurate with his professional training and experience as requisitions are placed with the Procurement and Assignment Service by military, governmental, industrial or civil agencies requiring the assistance of those who must be dislocated for the duration of the national emergency.

VI. All Physicians Over Forty-Five

All physicians over 45 will be asked to enroll with the Procurement and Assignment Service at an early date. Those who are essential in their present capacities will be retained and those who are available for assignment to military, governmental, industrial or civil agencies may be asked by the Procurement and Assignment Service to serve those Agencies.

The maximal age for original appointment in the Army of the United States is 55. The maximal age for original appointment in the Naval Reserve is 50 years of age.

All inquiries concerning The Procurement and Assignment Service should be sent to The Executive Officer, 5654 Social Security Building, 4th and Independence Avenues, S. W., Washington, D. C., and not to individual members of the Directing Board or of committees thereof.

MEDICAL ASSOCIATION OF GEORGIA

I wish to thank the members of the Association for the generous support of my appeal for funds to continue carrying on the Crawford Long campaign. Most of the appeal was made to the Atlanta doctors, inasmuch as a large amount went to the Woman's Auxiliary of the Fulton County Medical Society for putting on the Crawford Long show, March 30th. Many members outside of Fulton County, however, gave generous contributions and it is them that I wish to thank, especially. The total amount raised was $340.00.

Frank K. Boland, M.D., *President*,
Crawford W. Long Memorial Association.

PROCUREMENT AND ASSIGNMENT SERVICE BULLETIN

We are sending you this bulletin in order that you may have most recent information in regard to the Procurement and Assignment Service, and the situation as it pertains to all physicians, dentists, and veterinarians:

(1) You may anticipate a rapid expansion of the armed service and a corresponding acceleration in the demands for medical, dental, and veterinarian personnel to meet these rapidly growing needs;

(2) 15,000-20,000 physicians, dentists and veterinarians have offered their services to date, and their enrollment forms are now being processed, i.e., being checked against the files of the National Roster punch card system made available to this office by the American Medical, Dental and Veterinary Medical Associations and other organizations, and further checked in the office of the Procurement and Assignment Service;

(3) Within ten days, the first notifications of those men who are cleared at the Roster office and the Procurement and Assignment Service as meeting the requisitions made by the armed services will be ready for transmission;

(4) Lists of such men who have volunteered from each State are being sent to the State Procurement and Assignment Chairmen for immediate check, in order that only those available may be asked at this time to accomplish application forms for commission in the Army or the Navy. These forms will be sent to these men individually;

(5) In general, every man under 36 who is physically fit should volunteer for active service in the Army or the Navy, if he is now or can be made available. The most urgent need is for men under 36; however, many specialists up to 45 will be needed at once. The Procurement and Assignment Service expects that the present needs of the armed services for medical personnel will be filled by those under 45. Other age groups will be held in readiness to fill requisitions when their services are desired.

(6) Corps Area Chairmen will be called to Washington, Friday, January 30th, to be informed of the complete plans of organization and the method by which the Procurement and Assignment Service will function down to the most remote county. Following this conference, meetings will then be held by the Corps Area Chairmen with the members of the Corps Area committees and all their State chairmen for physicians, dentists, and veterinarians respectively. Within a few weeks, every physician, dentist, and veterinarian of the nation will receive an enrollment form from the office of the Procurement and Assignment Service. On this form all will be asked to volunteer for service in military, governmental, industrial, or civil agencies requiring their services for the duratiaon of the war. Each will be asked to designate a first, second, third, and fourth choice of the many agencies requiring assistance;

(7) A pamphlet of information is being prepared by the Committee on Information and will be ready for

(Continued on page 179)

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

INDUSTRIAL HYGIENE

The Georgia Department of Public Health has recently announced the establishment of an Industrial Hygiene Service for dealing with the acute health problems arising from the rapid expansion of industry for defense production. Therefore, it is fitting at this time to outline the history of industrial hygiene and its objectives.

Prior to the enactment of the Social Security Act, there were only two health departments with divisions of industrial hygiene—Connecticut and Ohio. A very efficient division of industrial hygiene had also been established in the New York Department of Labor. At the present time, there are at least thirty-four states and seven cities and counties, plus the territories of Hawaii and the Philippine Islands, plus the U. S. Army and the U. S. Navy, with official industrial hygiene divisions or services.

Even though Georgia has been later than some of the other states in organizing this service, the need has been well recognized by the Health Department for many years. In 1927 Dr. Abercrombie read a paper before the International Association of Industrial Accident Boards and Commissions in which he showed some of the losses due to illness. He said: "In the case of salaried workers, the loss falls wholly on the industries; while in the case of the hourly paid workers, the loss is divided—the worker losing the wages, the concern the output."

Since the establishment of the defense program it is estimated that there are approximately 500,000 workers employed in Georgia's manufacturing, mining, mechanical, and transportation industries. We have no records showing the loss of time among the workers due to sickness and accident, but studies elsewhere have indicated that in the country at large the average worker loses over eight days a year. If this is true in Georgia, the loss of time from accidents and illness in the above mentioned essential industries will have amounted to over four million man days in 1941. This represents about one-half the amount of labor required to build a battleship.

Considerable evidence has been accumulated which shows that much of this loss is unnecessary and that suitable preventive measures are economically sound. For example, the National Association of Manufacturers has made a survey of over two thousand companies from which it has estimated that a health program saves the average 500 employee plant $5,611.00 net each year. This is based on the actual costs to the company operating without a health program, such as compensation costs for injuries, production losses from idle machines, and wages paid to substitute employees. The savings in these costs which have been shown to result from the operation of a health program do not include the savings to the plant resulting from the 24.5 per cent reduction in labor turnover, nor the increased production capacity of the worker because of his improved morale and efficiency. Neither does it include the savings to the workers themselves in the typical 500 employee plant of approximately $22,500.00 each year in wages.

Not many years ago, industrial hygiene was considered to be a portion of the field of medicine dealing almost exclusively with diseases due to occupation. It has been shown, however, that only about 7 per cent of the loss of time from work due to illness or accidents occurring among industrial workers is due to diseases or accidents peculiar to the occupation. The remaining 93 per cent of morbidity is a result of ordinary diseases and accidents common to the non-industrial population. Industrial hygiene is now defined as that branch of the medical, nursing, engineering, and chemical sciences which is concerned with the study of the effects of environmental conditions in industry upon the health of industrial workers, and with the application of the principles of preventive and curative medicine and sanitary engineering in industrial establishments.

To solve the health problems peculiar to industry, the combined resources of the medical, engineering, nursing, and chemical professions are required. In order to meet these problems, the Georgia Department of Public Health has employed personnel trained in these fields. Laboratory facilities are being established to study gases, dusts, vapors, smokes, mists and other types of substances found in industry. Other existing laboratory services of the department are also available.

The problems can be attacked by two approaches: (1) personal hygiene, and (2) environmental hygiene. Personal hygiene problems come within the realm of the medical and nursing professions, while the solution of environmental hygiene problems is usually accomplished by the chemical and engineering personnél. However, there is a great deal of overlapping, and all the professional personnel must be familiar with all these approaches. Intelligent solution of the problems frequently necessitates the combined cooperative efforts of all the professions involved. Each must clearly understand the joint approach and cooperate with each other

and with the industrial management and workers. Remedial measures must be practical and cannot impose undue hardships on the management.

Physicians and nurses are particularly interested in: (1) occupational accidents; (2) occupational diseases; and (3) non-occupational illness. It is the duty of physicians to report every case of occupational disease in the same manner as they report communicable diseases. At the last meeting of the State Board of Health, the following regulation was adopted:

"It shall be the duty of each physician having knowledge of any persons whom he believes to be suffering from any occupational disease to report the same to the board of health in the same manner as he reports other notifiable diseases to the board of health.

"Occupational diseases may be defined for the purpose of this regulation as any disease contracted as a result of the nature of employment. Bulletin No. 41 of the U. S. Department of Labor, entitled 'Occupation Hazards and Diagnostic Signs,' is adopted as a guide to inpairments to be looked for in hazardous occupations. A copy of this bulletin shall be made available to all physicians to serve as a guide in reporting.

"All reports made pursuant to the provisions of this regulation shall be confidential records of the board of health and shall not be open for public inspection. The State Department of Public Health is authorized to investigate and to make recommendations for the elimination or prevention of occupational diseases which have been reported to it or which shall be reported to it in accordance with the provisions of this regulation. Said department is also authorized to study and make recommendations in regard to conditions that may be suspected of causing occupational diseases. Information obtained and opinions based upon these investigations shall be confidential reports of the board of health and shall not be open for public inspection."

In regard to occupational accidents, prevention is of greatest importance. Every plant should have available medical and nursing personnel, a safety engineer, trained first-aid workers, and first-aid kits at strategic points. A centrally located dispensary with a nurse under medical supervision is desirable and often essential.

Examples of occupational diseases include: (1) pneumoconioses, such as silicosis; (2) metal fume fevers; (3) metal poisoning; (4) effects of exposure to radio-active compounds and x-rays; (5) ultra-violet radiation burns; (6) gas poisoning; (7) organic solvent vapor poisoning; (8) dermatitis; and (9) allergy.

Prevention of these diseases is a major consideration of the Industrial Hygiene Service. In many instances, prevention is the only method of control. This is especially true of those diseases which if they once develop may be progressive even though there is no further exposure. Silicosis and chronic benzene poisoning are typical examples. The worker who has absorbed sufficient benzene to destroy his blood forming organs is a doomed man even though there is no further exposure.

Cure of occupational diseases entails specialized knowledge by the physician of the toxicology of the specific substances involved and the pathology resulting from exposure to them. It is a function of the industrial hygiene service to keep abreast of current knowledge along these lines and render free consultation service and advice to physicians in the diagnosis, treatment, prevention and control of all preventable diseases, both of non-occupational as well as occupational origin.

Some of the measures which have been shown to be most effective in prevention of diseases and accidents among industrial workers and which will be promoted by the industrial hygiene service include:

(1) Pre-employment examinations of all applicants and assignment of each applicant to an occupation in accordance with his physical and mental capabilities.

(2) Periodic examinations of all employees, including any special medical and laboratory studies indicated as a result of exposure to specific hazards. If signs of toxicity are found, the susceptible employee should be assigned to work which is not dangerous to him.

(3) Lunch room facilities on a cooperative basis to teach and provide the fundamentals of a balanced diet.

(4) Mid-morning and mid-afternoon recess period for all workers to provide opportunity for relaxation and refreshment.

(5) Control measures for cancer, tuberculosis, venereal diseases, and other communicable diseases in cooperation with the established policies of the Health Department.

(6) All known or suspected hazards should be thoroughly investigated and suitable control measures devised and applied.

(7) Provision of a system for recording and following through each case of absenteeism resulting from illness or injury. This entails home visiting by the nurse.

(8) A practical system of case records and reports is necessary similar to the records used in other public health activities.

(9) Health education through talks, movies, educational pamphlets, posters, etc. The United States Public Health Service has available a series of pamphlets on health in industry. Subjects include flu, appendicitis, carbon monoxide, and benzol. These are suitable for distribution in pay envelopes, or in other ways and are very helpful.

(10) Rehabilitation service. Suitably trained cripples make reliable workers, and become more stable employees than the so-called "physically perfect group."

We have attempted to outline briefly some of the highlights of the industrial hygiene program and to show how this new service of the State Health Department will function in an advisory and consulting capacity to industry. It will assist in the discovery of unknown hazards,

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GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

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Secretary—Mrs. Esther Watts, R.N., Columbus
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President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

THE AMERICAN RED CROSS NURSING SERVICE

Jane Van De Vrede, R.N., Atlanta, Chairman State Committee on Red Cross Nursing Service for Georgia.

The Spanish American War, with its incidence and high death rate from typhoid fever among the soldiers, brought the need of more and better trained nurses forcibly to the attention of the War Department. Jane A. Delano, a young graduate nurse, volunteered her services in an epidemic of yellow fever in Jacksonville, Fla. She unwittingly demonstrated the relation of the mosquito to the disease by insisting that the nurses' and patients' beds be enclosed in mosquito netting. No cases developed among the nurses.

The Surgeon General of the Army appointed her as superintendent of the Army Nurse Corps. Miss Delano soon after was elected as president of the American Nurses' Association. The American Red Cross was reorganized. This combination of circumstances made the opportunity to secure a better organized Army Nurse Corps and a reserve under the American Red Cross.

Miss Delano was appointed chairman of a National Red Cross Enrollment Committee with representatives from the government services and the profession of nursing as members. Under this committee, local and state committees were appointed whose membership was nominated by the professional nursing associations. This organization persists today.

These committees act as recruiting and approving committees. From year to year enrollments increased forming a reserve of the ablest nurses in the profession and creating a country wide standard of training and proficiency. It was natural to turn to this reserve for other services such as disasters, epidemics, etc.

Miss Delano resigned as superintendent of the Army Nurse Corps to become full-time Director of the Red Cross Nursing Service which she held until her death in France in 1919. She recognized the needs of rural and small town areas for nursing and nursing instruction to meet community and family health services. A town and country nursing service on a visiting basis was organized and she with others collaborated in an elementary nursing textbook for home use.

Red Cross classes were organized with this book as a text and Red Cross Nurses were appointed to teach these classes to lay groups. By the time of World War No. 1, twenty-five thousand nurses were ready to serve war needs at home and abroad and thousands of classes in Home Nursing had been completed. These demonstrated the wisdom of such instruction during the influenza epidemic of 1918.

Following the war, the rural nursing service was expanded into a countrywide chapter community service in public health nursing. State departments of health were assisted in forming statewide supervisory services. Nurses returning from oversea service were given scholarships in public health nursing courses to meet this development.

As enrollments of nurses increased it became necessary to divide them into three groups. The first reserve consists of nurses who can serve anywhere, anytime and with the military forces. The second reserve consists of those who, because of marital or physical limitations, cannot serve with the armed forces but can render any other service. The third reserve consists of those who can serve only in a very limited capacity. A nurse is not required to surrender her badge or appointment card because of inactivity but if she resigns or her appointment is annulled she is expected to do so.

Annually the local committees send to each Red Cross Nurse a questionnaire on which she lists her availability for service and any change in her status. If she fails to reply for two consecutive years the local committee may recommend the annulment of her appointment.

We are now engaged in World War No. 2. Many more nurses will be needed for war services and the maintenance of health standards on the home fronts. Physicians can assist in recruiting nurses already trained and in persuading young women to enter nursing as a profession.

The American Heart Association will hold its eighteenth scientific meeting at Chalfonte-Haddon Hall, Atlantic City, N. J., June 5-6.

WOMAN'S AUXILIARY : OFFICERS 1941-42

President—Mrs. Lee Howard, 625 East 44th Street, Savannah.
President-Elect—Mrs. J. Lon King, 223 Buford Place, Macon.
First Vice-President—Mrs. W. A. Selman, 760 Penn Avenue, N. E., Atlanta.
Second Vice-President—Mrs. Fred Rawlings, Sandersville.
Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta.
Third Vice-President—Mrs. J. R. McMichael, Quitman.
Recording Secretary—Mrs. J. C. Metts, 303 Anderson Ave., Savannah.
Parliamentarian—Mrs. J. E. Penland, Waycross.
Treasurer—Mrs. Bruce Schaefer, Toccoa.
Corresponding Secretary—Mrs. Charles Usher, 6 East Liberty Street, Savannah.
Historian—Mrs. Ralph Freeman, Hoschton.

Savannah Auxiliary

The Woman's Auxiliary to the Georgia Medical Society met in Savannah recently at the home of Mrs. J. K. Quattlebaum; co-hostesses being Mesdames S. E. Wilson, F. B. Brown and H. H. McGee. Mrs. E. N. Gleaton, president, presided. Members voted to send $5 to the Health Film Fund. Mrs. W. R. Dancy, chairman of Health Films, reported having shown the film "More Life in Living" to 400 students and 114 adults last month. It was decided to send boutonnieres and a note to all doctors on Doctors' Day and flowers to doctors' widows. Announcement was made that Dr. Lee Howard had been appointed advisor to the Auxiliary and that Mrs. R. V. Martin had been named president-elect.

The president stated that the meeting of the Woman's Auxiliary to the First District Medical Society would be held on March 18. Mrs. T. A. Petersen, chairman of the cancer committee, reported having attended a meeting with representatives from the Medical Society and the Auxiliary to discuss the local cancer clinic. Mrs. J. C. Metts was elected chairman of the nominating committee, other members being Mesdames. L. W. Williams, C. G. Redmond, H. H. McGee, and S. F. Rosen. Miss Annie Taylor, from the Oral Hygiene Department of the State Health Department, showed the film, "About Faces" and Dr. J. Allen Scott, biologist in the malarial and hookworm service, spoke on "Hookworm Disease in Georgia as Compared with Venezuela and Egypt."

Randolph-Terrell

Mrs. F. M. Martin, Mrs. E. C. McCurdy and Mrs. J. T. Arnold entertained the Woman's Auxiliary to the Randolph-Terrell County Medical Society at the Gay Hotel in Cuthbert recently. Mrs. W. G. Elliott, president, presided and reports were made by chairmen, each indicating that much progress has been made in carrying out Auxiliary objectives during the year. Mrs. Martin, chairman of Research in Romance of Medicine, read an interesting paper on the life and accomplishments of Dr. Jim Patterson, who spent years of service in Stewart County, residing at Lumpkin. A delightful social hour followed.

Fulton County

Climaxing a year's study on the "Role of the Doctor's Wife in National Defense," the Woman's Auxiliary to the Fulton County Medical Society sponsored a health education meeting in February at the new Academy of Medicine on West Peachtree Street in Atlanta. Mrs. Murdock Equen, president, presided and welcomed the honor guests, who were presidents and health chairmen of the P.-T.A. in the city and county. Dr. Roy Kracke, professor of pathology at Emory University, talked on "Some Dangerous Effects of the Indiscriminate Administration of Drugs." Dr. Kracke's research along the line of many new drugs has received nationwide recognition from the medical profession.

Miss Mary Emma Barnes, of the Georgia Health Education Department, discussed "Nutrition and National Defense" and conducted an informal roundtable on this subject. The program was arranged by Mrs. E. N. Schillinger, health education chairman, and was presented by Mrs. William Dunn, vice-president and program chairman. Mrs. William Matthews and her committee had charge of a delightful luncheon following the meeting.

National Convention

Haddon Hall will be the headquarters for the annual meeting of the Woman's Auxiliary to the American Medical Association, which will be held in Atlantic City, N. J., on June 8-12. Requests for reservations should be sent immediately to Haddon Hall, Atlantic City, N. J. This will be the twentieth annual convention of the Woman's Auxiliary to the American Medical Association.

Baldwin County

Mrs. Richard Binion, president of the Woman's Auxiliary to the Baldwin County Medical Society, entertained the members of the Auxiliary and Mrs. Lee Howard, of Savannah, state president, at luncheon at her home in Milledgeville recently. Spring flowers, jonquils and azaleas were arranged in the reception rooms and the guests were seated at small tables for luncheon. Later a business meeting was held, opened by singing the national anthem and a prayer by Mrs. Charles H. Richardson. Mrs. Binion introduced Mrs. Howard, who talked on different phases of auxiliary work in the state. She stressed the fact that auxiliary members have

always been defense workers, striving to preserve high standards of health and are now in step with health phases of Civilian Defense and Red Cross work. Mrs. Stewart Wooten, another visitor, was introduced by Mrs. Dawson Allen and talked of health education along defense lines. Mrs. H. D. Allen and Mrs. Frank Mitchell were elected delegates to the state convention in Augusta and Mrs. Edward Small and Mrs. C. H. Richardson were named alternates.

Ware County

The Woman's Auxiliary to the Ware County Medical Society met recently with Mrs. B. H. Minchew, Mrs. W. D. Mixson and Mrs. J. E. Penland, hostesses, at the former's home in Waycross. Mrs. Loomis Pomeroy, vice-president, presided in the absence of the president, Mrs. Braswell Collins. Mrs. W. F. Reavis and Mrs. Ansley Seaman were appointed delegates to the state convention. The Auxiliary arranged at this time for its second purchase of defense stamps. Mrs. Kenneth McCullough and Mrs. W. C. Hafford reported on making a poster to be exhibited at the state convention. The Ware County Auxiliary has been very active during the year. The members voted to buy defense stamps monthly instead of having luncheons. In cooperation with the Junior Woman's Club a dental clinic for underprivileged children will be started. Several health films were shown during the year and interesting programs were presented, among the speakers being Dr. J. H. Lawrence, who talked on the history of dentistry, and Dr. J. D. Stillwell, medical director of the Southeastern health region, who read a medical manuscript written in 1852 by the late Dr. Bowden, this bringing out in sharp contrast the practice of medicine 90 years ago and today.

Barrow County

The Woman's Auxiliary to the Barrow County Medical Society met recently at the home of Mrs. C. B. Almand in Winder. Mrs. Almand, president, presiding. Mrs. W. T. Randolph, newly appointed health education chairman, reported that a county wide health program for Negroes had been given recently and three health films on syphilis, house fly and tuberculosis shown. Dr. W. L. Matthews and Dr. S. T. Ross talked at these meetings, others of which will be given in future. Dues were paid and contributions made by the student loan fund, public relations fund, health films fund and Women's Field Army for Control of Cancer.

Mrs. Almand announced that she and Mrs. R. P. Adams would entertain the Barrow County Medical Society on Doctors' Day and urged members to attend the Crawford W. Long centennial celebration to be held in Jefferson on that day. Mrs. S. T. Ross and Mrs. W. L. Matthews were appointed delegates to the ninth district meeting, to be held in Toccoa, with Mrs. E. M. McDonald as alternate. Mrs. Ross thanked the Auxiliary for flowers sent to her and Dr. Ross on their golden wedding anniversary. Refreshments were served following the meeting.

PROCUREMENT AND ASSIGNMENT SERVICE BULLETIN

(Continued from page 174)

distribution at an early date, copies of which will be available upon request to this office;

(8) Bulletins will be issued from time to time to all committees, State society secretaries, and national and State journal editors, in order that the entire profession may be kept up to date;

(9) Hundreds of letters from physicians are coming to this office asking questions in regard to the Procurement and Assignment Service. We, here, have attempted to answer these letters quickly and adequately in spite of temporary impediments incident to the establishment of a complete office. These have tended to slow us up but now that the organization is in the process of completion we hope to be able to keep you informed;

(10) At an early date the physical standards for commissions in military and governmental agencies will be published in order that by self-analysis, physicians, dentists and veterinarians may determine their ability to meet the requirements for commissions.

(11) Attached is a copy of a recent release which will be of additional help.

(12) A formal acknowledgment is being made to the thousands of volunteer enrollments as rapidly as possible. We hope in the future to answer correspondence in a more formal and personal manner. Rather than to delay, however, we find it expedient to answer your communication of recent date with this form letter. Kindly accept it as a personal message intended to keep you informed. If you, or any other physician, dentist, or veterinarian in your State, have any further questions, we suggest that the majority of these will be answered in the national and State journals. If your questions are unanswered, kindly communicate with the Washington office.

Accept the thanks of the Directing Board for your interest and cooperation.

For the Directing Board:

Sam F. Seeley, M.D.
Executive Officer
Procurement and Assignment Service.

Walker-Catoosa-Dade Counties Medical Society

The Walker-Catoosa-Dade Counties Medical Society announces the following officers for 1942:

President.....F. H. Simonton, Chickamauga
Vice President.....C. W. Stephenson, Ringgold
Secretary-Treasurer.....P. M. Golley, LaFayette
Delegate.....F. H. Simonton, Chickamauga
Alternate Delegate.....R. C. Shepard, LaFayette

NEWS ITEMS

DR. A. M. PHILLIPS, Macon, notified the members of the Bibb County Medical Society of a special call meeting which was held on March 24. The meeting was called to obtain important information for the Procurement and Assignment Committee of physicians.

DR. C. D. WHELCHEL, Gainesville, spoke before a meeting of the Bibb County Medical Society, Macon, March 17, on *Surgical Aspects of Tuberculosis.*

THE SEVENTH DISTRICT MEDICAL SOCIETY met at the Dalton Country Club, Dalton, April 1. Titles of papers on the scientific program were: *Treatment of Abortions* by Dr. Fred B. Ragland, Dalton; discussed by Dr. Fred H. Simonton, Chickamauga, and Dr. Jno. T. McCall, Jr., Rome. *Tuberculosis — Our Progress and Unsolved Problems*, Dr. C. M. Sharp, Alto; discussed by Dr. D. L. Wood, Dalton, and Dr. Warren Gilbert, Rome. *Management of Perforated Peptic Ulcers*, Dr. Murl M. Hagood, Marietta, and Dr. Lester Harbin, Rome. *Address*, Dr. Allen H. Bunce, Atlanta, president of the Medical Association of Georgia. *Management of the Asthmatic Patient*, Dr. Hal M. Davison, Atlanta; discussed by Dr. M. V. B. Teem, Marietta, and Dr. J. E. Billings, Calhoun.

DR. RUSSELL H. OPPENHEIMER, Emory University, announces that Dr. Eugene A. Stead, Jr., of Peter Bent Brigham Hospital and Harvard University Medical School, Boston, will be head of the Department of Internal Medicine of Emory University School of Medicine.

THE TUMOR CLINIC OF THE MACON HOSPITAL had Dr. John Shelton Horsley, Richmond, Va., as a guest on March 26 to discuss ten types of cancer and suggest necessary treatment.

THE FIRST DISTRICT MEDICAL SOCIETY met at Statesboro March 18. Dr. Charles Usher, Savannah, spoke on *Vesicovaginal Fistula;* Dr. S. Elliott Wilson, Savannah, *Transurethral Resection;* Dr. Harry T. Harper, Augusta, *Heart Disease in Pregnancy;* Dr. Julian K. Quattlebaum, Savannah, led talks on *Surgical-Pathological Conference*, discussed by Dr. Lee Howard and Dr. E. C. Johnson, both of Savannah. Dr. E. Carson Demmond, Savannah, *Management of Breech Presentation.*

DR. M. J. EGAN, Savannah, read a paper on *War Surgery of the Nervous System* before a meeting of the Georgia Medical Society, Savannah, March 24; the discussion was led by Dr. Walter Norton and Dr. R. L. Oliver, both of Savannah. Dr. Henry Scheye reported a case, *Unusual Operation for Coronary Thrombosis.*

A VISITING STAFF MEETING OF THE GRADY HOSPITAL, Atlanta, was held on March 10. Dr. Lester I. Goldsmith reported a case, *A Case of Coarctation of the Aorta;* Dr. Lewis Corum, *Hypertelorism;* discussed by Dr. Elmer Vorisek.

THE STAFF MEETING OF EMORY UNIVERSITY HOSPITAL, Emory University, was held on April 9. Dr. C. W. Strickler, Jr., reported a case, *Hookworm Disease;* Dr. J. D. Martin and Dr. W. H. Trimble, *Magacolon;* Dr. C. H. Paine, *Chronic Esophagitis and Malnutrition.*

DR. J. A. MCCULLOUGH announces the opening of her office in Suite 205-6 The Lawrence Building, 119½ East Court Square, Decatur. Practice will be limited to diseases of infants and children.

THE FIFTH DISTRICT MEDICAL SOCIETY met at the Academy of Medicine, 875 West Peachtree Street, N. E., Atlanta, April 6. Titles of discussions and papers on the program were: *Address* by Dr. Allen H .Bunce, Atlanta, president of the Medical Association of Georgia; *Address*, Dr. Jas. A. Redfearn, Albany, president-elect of the Medical Association of Georgia; *Endocrinopopathies and Carbohydrate Metabolism*, Dr. Seale Harris, Birmingham; *Blood Transfusion Service for the Community*, Dr. Paul Hoxworth, Department of Surgery, University of Cincinnati. Members who contributed articles to The Bulletin of the Fulton County Medical Society published in its April 6 issue were as follows: Doctors Chas. E. Boynton, T. L. Byrd, J. K. Fancher, J. Gaston Gay, all of Atlanta.

THE GEORGIA MEDICAL SOCIETY, Savannah, met on April 14. Dr. J. Gregg Smith read a paper entitled *Injuries of the Kidney*, discussed by Dr. H. Y. Righton. Dr. L. J. Rabhan and Dr. Lee Howard reported a case, *Unusual Tumor of the Neck.*

THE RICHMOND COUNTY MEDICAL SOCIETY met recently. Dr. Walter C. Alvarez, Rochester, Minn., was an invited speaker. He spoke on *Nervous and Mental Conditions* and stated neurotic people often are the keenest and most wide awake persons of all.

DR. WM. A. COLE, Savannah, has been elected president of the staff of the Warren A. Candler Hospital, Savannah, for the tenth consecutive year. Dr. Oscar H. Lott was elected vice-president, and Dr. John L. Elliott, secretary.

DR. KENNETH MCCULLOUGH and DR. W. M. FLANAGAN, Waycross, entertained members of the Ware County Medical Society at the Phoenix Hotel, Waycross, March 31. Dr. D. M. Bradley, Waycross, read a paper entitled, *Some Consideration in Deep X-Ray Therapy.*

DR. GEORGE W. FULLER, Atlanta, returned recently from a trip to New York City and Rochester, Minn., where he attended clinics and heard post-graduate lectures.

THE WALKER COUNTY MEDICAL SOCIETY and county officials have obtained a fund of $7,500 from the Federal Government and with the aid of additional funds by Walker County, a health center will be established in Rossville.

DR. D. M. BRADLEY, Waycross, made a report to the Ware County Medical Society at a recent meeting on the progress and work of the Ware County Indigent Cancer Clinic. He stated that during 27 months more than 400 patients had been examined.

DR. O. D. MIDDLETON, Ludowici, has installed a modern x-ray machine in his offices.

The visiting staff of the Crawford W. Long Memorial Hospital, Atlanta, met on April 14. Dr. D. K. Kitchen, Parke, Davis and Company, Detroit, spoke on *Sex Hormones, Physiology, Diagnosis and Therapy.*

The Eighth District Medical Society met at Hotel Daniel Ashley, Valdosta, April 14. Dr. C. M. Carpenter, professor of Preventive Medicine, Rochester University, Rochester, N. Y., spoke on *Community Control of Gonorrheal Infection;* Dr. Ashley Bird, Valdosta, reported a case; Dr. J. A. Redfearn, Albany, president-elect of the Medical Association of Georgia, delivered an address; Dr. D. M. Bradley, Waycross, read a paper, *Deep X-Ray Therapy;* Major Charles A. Pigford, Medical Corps, U. S. Army, Valdosta, spoke on *Aviation Medicine.*

OBITUARY

Dr. Blair Cantrell Hale, Rossville; member; Chattanooga Medical College, Chattanooga, Tenn., 1909; aged 55; died suddenly on February 25, 1942, of heart disease. He was born at Rising Fawn. He was a prominent physician in his home county and in Chattanooga, Tenn., and one of the State's best citizens. Dr. Hale began practice in Ringgold, Catoosa County, and later moved to Rossville. He was a member of the Walker County Medical Society and the F. & A. M. Surviving him are his widow, four brothers and four sisters. Rev. R. D. Hart and Rev. M. L. Harris officiated at the funeral services held at Page-Hancock Funeral Home. Burial was in the Anderson cemetery in Ringgold.

Dr. Charles W. Peek, Cedartown; member; Emory University School of Medicine, Emory University, 1888; aged 76; died on March 1, 1942, in his office of heart disease. He was born and reared in Polk County. Spent his life there in an effort to upbuild every worthwhile undertaking. Dr. Peek served numbers of terms in the General Assembly of Georgia and one term in the State Senate. He was a member of the Board of Directors of the Commercial Bank of Cedartown, the Polk County Medical Society and Antioch Baptist Church. Surviving him are one son, Chas. W. Peek, Jr., one daughter, Mrs. Will A. Barr, Cedartown. Rev. J. F. Wallace, Rev. A. W. Robbins officiated at the funeral services conducted at Antioch Baptist Church. Burial was in the churchyard.

Dr. Joseph W. Neal, Scotland; member; Emory University School of Medicine, Emory University, 1889; aged 77; died on March 3, 1942, at his home after a long illness. He was a native of Harris County. Dr. Neal had an extensive practice in Telfair and adjoining counties and was held in high esteem by hundreds of friends. He was a member of the F. & A. M.,Shrine, and the Scotland Baptist Church. Surviving him are his widow, one sister, Mrs. Mary Neal Ellison; one brother, Welborn Neal, Columbus. Rev. C. A. Morrison and Rev. L. D. Shippey officiated at the funeral services conducted at the Scotland Methodist Church. Interment was in Scotland cemetery. Pallbearers were: Doctors W. H. Born, F. R. Mann, S. T. Parkerson, John T. Persall and C. J. Maloy, all of McRae; Dr. F. P. Harbin, Lumber City.

Dr. G. D. Dorough, Quitman; member; Emory University School of Medicine, Emory University, 1895; aged 76; died on March 16, 1942. He was a native of West Point. He had a resourceful mind which was continuously active in constructive work, keenly interested in education and served on the Quitman Board of Education for many years, also as steward in the Methodist church. In his activities, he contacted many people who recognized him as a useful leader. Surviving him are his widow, three sons, Roland Dorough, Quitman; Lieutenant-Commander Warren Dorough, in the United States Navy, and George Dorough, Niagara Falls, N. Y. Rev. H. G. Shearouse officiated at the funeral services conducted at the McGowan-Maxwell Chapel.

Dr. Edwin Gaillard Adams, Greensboro; member; Vanderbilt University School of Medicine, Nashville, Tenn., 1899; aged 65; died March 18, 1942. He was born and reared in Greene County and came of one of the most respected pioneer families of that section. Dr. Adams served as Captain in the former World War with the Medical Corps of the American Expeditionary Forces. He was a member of the Lions Club, American Legion, F. & A. M., member and elder of the Presbyterian church. Surviving him are his widow, one son, Lieut. E. G. Adams, Jr., Fort Benning; two daughters, Mrs. Harold E. Brook, Greensboro, and Miss Paige Adams, Wesleyan College, Macon. Rev. Sam Zealy, with other pastors of the churches in Greensboro, officiated at the funeral services conducted at the Presbyterian church. Burial was in the City cemetery.

INDUSTRIAL HYGIENE

(Continued from page 176)

and cooperate with all existing agencies in measures for prevention and control of all diseases and accidents to which the worker is exposed. Its objective is not only to help keep the worker free from disease, but to help provide an environment conducive to exuberant good health.

All studies will be in cooperation with the local health authorities and plant physicians. Requests for the services outlined above should be directed to the local health department or to the Georgia Department of Public Health.

L. M. Petrie, M.D., *Director*
Industrial Hygiene Service
Division of Preventable Diseases.

Appling-Altamaha County Medical Society

The Altamaha Medical Society announces the following officers for 1942:

President.....E. J. Overstreet, Baxley
Vice President.....H. C. McCracken, Baxley
Secretary-Treasurer.....J. T. Holt, Baxley
Delegate.....H. C. McCracken, Baxley

MUNICIPAL HEALTH CENTER BUILDING

The City of Savannah dedicated, on the evening of Wednesday, March 25th, its new Municipal Health Center Building. The three story building, recently completed as a joint City-W.P.A. Project, at a cost of $100,000.00 is located at the corner of Drayton and Charlton Streets. It houses all of the official and non-official or voluntary health agencies incorporated into the organization known as the Savannah Health Center, directed by the City and County Health Department.

The dedication exercises took place at 8:00 P.M. in the Gold Room of the De Soto Hotel, followed by an inspection of the building and the unveiling of a commemorative bronze plaque. The invocation was delivered by the Rt. Rev. Middleton S. Barnwell, Episcopal Bishop of Georgia.

The principal address, "The Health Center and The Health Officer" was delivered by Dr. H. S. Mustard, Director, DeLamar Institute of Public Health, Columbia University, New York. The speaker was introduced by the Savannah-Chatham County Health Officer, Dr. Charles C. Hedges. Other speakers on the program were Honorable Thomas Gamble, Mayor of Savannah; Dr. Allen H. Bunce, President, Medical Association of Georgia, and Dr. Monroe J. Epting, past President of the Savannah Health Center. The current President of the Health Center, Dr. A. J. Waring, presided.

Mayor Gamble reviewed progress made in the field of health services in Savannah since the appointment of the first health officer in 1790. Dr. Epting presented a historical sketch of the Health Center Organization.

NO ROADS TO RICHES

No profession performs a greater service for the American people than medicine. Upon the doctor falls the great task of keeping us physically and mentally healthy. And the typical doctor does that job without regard to his own comfort, his own pleasure or his own purse.

To become a doctor takes ten years of rigorous education. And after graduation many more years must go by before the young medico can hope to develop a sizeable practice. Yet the financial rewards that come to the doctor are extremely moderate in the light of the long and costly training he must undergo.

"Medical Economics" recently published a survey of the gross income of some 7,500 representative men of medicine. Slightly more than 50 per cent of these doctors had incomes ranging from $1,500 to $6,500 a year. Less than 5 per cent had incomes of more than $16,500. And only seven-tenths of one per cent enjoyed incomes in excess of $30,500.

These incomes, remember, are gross incomes. Out of them must be paid all the doctor's heavy expenses—office, supplies, nurses, transportation, etc.—before he has anything left for himself.

Medicine, in short, is no road to riches, and all doctors know it. Doctors of great reputation, with very large practices, are often modest earners—because so much of their work is done without pay. The poor man who can pay little or nothing gets the same attention from the doctor as does the rich man who can pay much. The goal of medicine is service to all.

Columbus (Ga.) Ledger, Columbus, Dec. 9, 1941.

LEST WE FORGET

THE AMERICAN'S CREED

Written by William Tyler Page. Accepted by the House of Representatives on behalf of the American People, April 3, 1918

I believe in the United States of America as a Government of the people, by the people, for the people; whose just powers are derived from the consent of the governed; a democracy in a republic; a sovereign nation of many sovereign states; a perfect union, one and inseparable; established upon those principles of freedom, equality, justice and humanity for which American patriots sacrificed their lives and fortunes. I therefore believe it is my duty to my country to love it; to support its Constitution; to obey its laws; to respect its flag, and to defend it against all enemies.

"WAR OR NO WAR—

Depression or no depression, in good times and in bad," Mead Johnson & Company are keeping the faith with the medical profession. Mead Products are not advertised to the public. If you approve this policy, please specify *Mead's*.

VITAMIN FILMS IN COLOR

Eli Lilly and Company, Indianapolis, announces the release of three 16-mm. silent motion pictures in color descriptive of vitamin deficiency diseases. The films are available to physicians for showing before medical societies and hospital staffs. One deals with thiamine chloride deficiency, one with nicotinic acid deficiency, and the third with ariboflavinosis. The major part of all films concerns the clinical picture presented by the patient with reference to treatment by diet and specific medication. They do not contain advertising of any description, nor is the name of Eli Lilly and Company mentioned.

The films were made at the Nutrition Clinic of the University of Cincinnati at the Hillman Hospital, Birmingham, Alabama, where studies were initiated in 1935, under the joint auspices of the Department of Internal Medicine of the University of Cincinnati and the University Hospitals of Cleveland. Spbsequently, these investigations became a co-operative project between the Departments of Medicine and the University of Cincinnati and the University of Alabama, and the Department of Preventive Medicine and Public Health of the University of Texas.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL ASSOCIATION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

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MEDICAL PROBLEMS OF 1942

ALLEN H. BUNCE, *M.D.*
Atlanta

We are at war. We have "war time," priorities, rationing, restrictions, conscription (usually referred to by the more euphonious "selective service"), speed-up, production, production, production. Of course, the medical profession is supporting the war effort to the full extent of its duty. We have always done so in all wars. We will furnish the doctors for the Army and Navy. Our soldiers, sailors, marines and airmen will have the best medical and surgical care that modern science affords. We will follow our men — even into the jaws of the valley of death. We pledge this to the men at the front, and to their fathers and mothers at home. The men in all the services now are receiving better medical and surgical attention than have ever been received by the men of any army or navy in the world's history. The resistance of our allies aided by "lease-lend" gave us a little much needed time to prepare. Just contrast the medical picture of 1941-42 with that of 1917-18. So far, this time, we've had no serious epidemics, little serious illnesses—and all illnesses and injuries have received prompt and efficient treatment. Yes, medical men will do their job for the soldiers and sailors.

But we have another equally important task: caring for those at home—all engaged in the supreme task of preserving our democracy. This huge task will tax all persons and all facilities to the limit, but it can and will be done. And in the doing of this job it is well for us to keep clearly in mind a few fundamental facts, such as the standards of education and training, the utilization of our facilities and personnel to the best advantage and, finally, the complete cooperation of all to keep our Army and Navy well and a healthy people at home.

What are some of the facts about Georgia's problems of today?

We Georgians are proud of our native State. We glow with pride when we think of Georgia as one of the thirteen original colonies and, later, as "The Empire State of the South." Georgia has a population today of more than 3,000,000 persons, of whom 65 per cent are white and 35 per cent Negro. The average Georgian has reached the seventh grade in education. Thirty per cent of our people never reached the fifth grade in school. Eight per cent have had one or more years in college but only 3.3 per cent were granted degrees. Ninety-nine and four-tenths per cent of our white people are native Americans. Sixty-five per cent of our people live in towns and cities.

In January, 1940, the Citizens' Fact Finding Movement of Georgia published the following facts about Georgia's health:

"1. One-sixth of all deaths from malaria in the United States during the past ten years occurred in Georgia. For years Georgia has ranked from first to third place in malaria deaths.

"2. One out of every ten inmates of our insane asylum is there because of syphilis of the brain. It costs Georgia taxpayers approximately $150,000 annually to support them.

"3. Only 170 out of the 593 incorporated towns in Georgia have public sewer systems. And in those 170 towns only 41 per cent of the houses are connected with available sewers. Out of 402,603 rural houses in Georgia (1930 census), it is estimated that less than 100,000 have any means of sanitary sewage disposal.

"4. During 1938-1939 dental inspection of 161,343 school children in 98 counties of the State revealed that 72 per cent needed dental treatment.

"5. Only one town in Georgia has a milk supply which is on the accredited list of the United States Public Health Service.

President's address before the Medical Association of Georgia, Augusta, April 30, 1942.

"6. It is estimated that communicable disease accounted for 1,296,551 days of disablement among Georgia people during 1938. This is equivalent to 3,552 years. . . ."

This was Georgia's health picture at the end of 1939.

The Annual Report of our State Department of Public Health for 1941 is a veritable mine of valuable information about the health of our people. Yet, with its wealth of facts and figures it tells only a small part of the story. Georgia's Department of Public Health is perhaps its most valuable asset. The training and experience of the department's devoted personnel have enabled it to accomplish the almost impossible in improving public health. A brief review of its manifold activities would require much more than the time available to me. But the following facts deserve special mention:

1. The incidence of malaria was reduced by 38 per cent and the deaths by 38.4 per cent from the previous ten-years' average.

2. Plans and specifications were examined and approved for water supplies and purification projects in 67 towns and communities, and for sewage and sewage treatment in 65.

3. Dental inspection showed 72 per cent of the white children and 52 per cent of the Negro children needed dental treatment.

4. Twenty-six cities and counties are now operating under the United States Public Health Service Milk Ordinance and Code. But only one city in the State requires all milk to be pasteurized—Savannah. All milk and other dairy products should be as pure as it is possible to make them.

5. The year 1940 also showed the lowest incidence rate ever reached in measles, meningitis, pellagra, poliomyelitis, smallpox, typhoid fever, dysentery and pneumonia, and a decrease of the cases of undulant fever. Tuberculosis remained the same.

6. In the number of reported cases of syphilis there was a decrease from 23,718 new cases in 1939 to 21,725 in 1940. Gonorrhea decreased from 1,049 new cases in 1939 to 982 in 1940.

7. Fifty-seven and seven-tenths per cent of our people get their water from home wells and springs in rural areas and villages without public water supplies. Forty-two and three-tenths per cent of the population are served by public water systems; of this number 25.9 per cent are receiving water which has been filtered and chlorinated.

What of Georgia's educational system? That our problems here are largely economic are shown by the following figures:

The average annual per capita income in the United States in 1935[1] was $425; for Georgia $252; for New York (best) $700; and for Mississippi (poorest) $170. The average annual salary paid teachers in the common schools in the United States in 1935-36 was $1,283; for Georgia $587; for New York (highest) $2,414; and for Arkansas (lowest) $504. The average annual expenditure per child for common school education in the United States was $74.30; for Georgia $30.96; for New York (highest) $134.14; and for Arkansas (lowest) $24.55. Yet, Georgia spends from 40 to 50 per cent of her total income on the common schools. After health, education is our most important consideration for the present and future generations of our State.

All peoples have certain established measures which are called standards. Thus a certain quantity of sugar is called a pound, a certain distance a mile, a certain fineness of gold, 22 carat; a certain value a dollar. In arithmetic and spelling we have standards which we call correct. The engineer has standards for materials and for construction of bridges. The airplane, the tank and the gun all must come up to certain standards to protect our soldiers and sailors. All these standards are for the protection of the people.

Likewise we have standards in education. They are essential, particularly so in medical education. Just as the airplane engineer must know and enforce the standards for a bomber or fighter plane before he permits a pilot to take it aloft, so should the medical school know, teach and enforce the standards of medical education.

Standards in medical education are now and should be comparable to standards in general education, other technical education and other recognized standards in common use.

The practice of medicine requires discriminating judgment; it is dangerous and is becoming more so every day. New and powerful drugs—some of which are truly miraculous—are being introduced almost daily, but some of these drugs are potentially dangerous and must be used cautiously. As the engineer is responsible for the safety of the bridges of our great highway systems and the aircraft scientist is responsible for the mechanical and technical perfection of our aircraft in war and

in peace, so is the trained physician responsible for the judicious use of the drugs which he gives. What a terrible thing for a trusting parent to lose a loved one because of the improper use of a powerful and dangerous drug as a result of ignorance or carelessness on the part of anyone!

What a responsibility rests on the shoulders of all teachers in medical schools! Medicine has swung far to the side of science in the past decade, and science requires knowledge. Knowledge may be acquired only by study in properly equipped schools whose faculties realize the importance of proper medical education and give sufficiently of their time and talents to train their students.

Politics has no place in medicine, either in the practice of medicine or in medical education. To those who would try to lower the high standards of medical education from any motive whatsoever we say: "Father, forgive them for they know not what they do." Education comes before legislation, and any attempt to legislate against scientific facts is evidence of pure ignorance.

The American Medical Association is composed of some 117,000 American physicians. Among its objects are the promotion of the science and art of medicine and the betterment of public health.

Since it is impossible for a body of this size to transact business efficiently the members elect delegates to represent them. These delegates are elected from every state and territory of the United States in proportion to the number of members in the respective states and territories. These delegates constitute the House of Delegates, which in turn elects all officers. These officers are responsible to the delegates, who are responsible to the members. Thus the American Medical Association is and has its being in the majority of the American physicians who constitute its membership.

One of the official agencies of the Association is the Council on Medical Education and Hospitals, which is composed of seven members elected by the delegates. The functions of this council, composed of practitioners and teachers of medicine and surgery throughout the United States, are: "(1) To investigate conditions of medical education, including premedical, undergraduate and graduate medical education, hospitals and associated subjects, and to suggest means and methods by which the same may be improved; and (2) to endeavor to further the realization of such suggestions as may be approved by the House of Delegates."

The work of this council is entirely voluntary. It can inspect no hospital, college or other institution without the consent of the institution to be inspected. It can only "suggest means and methods by which the same may be improved." Of course, the members of this council must follow certain standards which are generally recognized as being essential for a good hospital or a good medical college. Both the control and conduct of a medical college must be such as will "promote the science and art of medicine and the betterment of public health." Medical colleges which meet the minimum standards are placed on an accredited list. This means that the colleges so listed have been inspected by members of the council and have been found to give a good medical education to their students; and to furnish a reasonable expectation that they will continue to do so.

Recently the University of Georgia School of Medicine was dropped from this accredited list of medical colleges, effective Sept. 1, 1942. We all feel certain that the student body, teaching staff, physical equipment and hospital facilities at the University of Georgia School of Medicine all compare favorably with the best in the land. We must conclude that this school was dropped because of the threatened political danger to its control. Just as Belgium was endangered by the German invasion of Poland, so was this medical school endangered by an arbitrary dictatorship controlling the University System of Georgia. The hand is attached to the forearm by the wrist. It has a thumb and four fingers. An injury to the thumb or any one of the fingers impairs the usefulness of the whole hand. When the wrist is destroyed the whole hand withers and dies. So it is with all the units of the University System

of Georgia. Each is dependent on the others, and all are dependent on the Board of Regents of this system.

Let no man be mistaken. We have a good medical school at Augusta and we will keep a good medical school there. The students deserve it. Their fathers and mothers who are making such noble sacrifices to send their boys and girls to school deserve it. The people of Georgia and of the entire Southeast deserve it, and the members of the Army, Navy and Marine Corps whom these students will serve later deserve it. The suspension will not affect the present student body or those that enroll before Sept. 1, 1942, and long before time for them to be graduated the people of Georgia will see to it that both the control and the teaching of this medical school are beyond the clutches of any dictator.

1. The Atlantic Monthly for August, 1941, pp. 212-219.

PRESENTATION OF THE PRESIDENT'S GOLD KEY TO DR. ALLEN H. BUNCE

W. A. SELMAN, M.D.
Atlanta

The honor is mine to honor a fellow physician. To have attained the presidency of the Medical Association of Georgia signifies leadership.

Let us glance back over the career of our retiring president and try to see whether it was by chance that he became president, or whether it was by the hard way. The first notable event in Dr. Bunce's life was the selection of his parents. In Bulloch County, Georgia, on Sept. 5, 1889, to James Allen and Georgia Anne McElveen Bunce, a son was born. His name was recorded in the family Bible as Allen Hamilton Bunce. He must have been a precocious youth to have attained and retained the knowledge necessary to have been graduated from the University of Georgia, with a Bachelor of Arts degree at the age of 18. For his leadership at the University he was awarded a Phi Beta Kappa key.

Leadership has characterized the life of Dr. Bunce throughout his academic and professional life. He entered the Atlanta School of Medicine in 1908 and was awarded his Doctor of Medicine degree in 1911. In graduate medicine, his leadership was even more marked. He established a laboratory of clinical pathology in Atlanta, and later devoted his talents to internal medicine. When the American College of Physicians was organized, Dr. Bunce was the first in Georgia to receive his fellowship in that organization.

In 1918, and again in 1924, he was elected a delegate to the American Medical Association and served until 1929. For the last three years of this time he was chosen vice-speaker of the House of Delegates. To prove what his fellow delegates thought of his leadership, in 1929 he was elected a trustee of the Association for five years, and then in 1934 he was re-elected for five more years!

How well our State was represented in that national body is a matter of record in its transactions.

In 1917 our country called for men, and leaders of men. Dr. Bunce volunteered his services and served as captain in the Emory Unit at Base Hospital 43. In 1920 the Medical Association of Georgia elected Dr. Bunce secretary-treasurer of this body, and during the sixteen years of his leadership as editor-in-chief of our State Journal, this publication was rejuvenated and soon took its place among the foremost state journals. As secretary his counsel was sought and respected by the House of Delegates, by Council, and by every committee with whom he met. He probably knows by name more doctors in the State of Georgia than any other man. In turn, probably more doctors in Georgia know him than any other doctor in Georgia.

In 1940 when Dr. Bunce's name was put in nomination for president-elect of this Association, he was the unanimous choice. The secretary was instructed to cast the ballot. One year later he became our president.

He has borne his mantle with honor and dignity. By his leadership he has guided the Medical Association of Georgia along

Address before a public meeting of the Medical Association of Georgia, Augusta, April 29, 1942.

the safe and sane principles of the American Medical Association. He has been a bulwark of strength to the Woman's Auxiliary to the Association, and his enthusiastic promotion of the educational program of this Association, both to doctors and to the public, has been outstanding.

Such leadership does not come by chance. It comes by hard work. It comes by having high principles and living by them. It comes from learning the medical needs of our nation and transforming them to the medical needs of our State. With such leadership we are loath to part.

Dr. Bunce, on behalf of the members of the Medical Association of Georgia, I present to you this gold key; may it ever remind you of our loyalty and love!

PRESENT DAY TREATMENT OF PNEUMONIA

Avary Dimmock, M.D.
Atlanta

During the past few years the treatment of pneumonia has undergone radical revision. While many of the older procedures are still in use, a new and effective weapon in the form of chemotherapy has been added. This new weapon is being rapidly adopted by the profession and through its use the mortality rate of pneumonia is being greatly reduced.

In April, 1938, Gray and Fulton, in an analysis of 460 cases of pneumonia reported a mortality rate of 34 per cent as compared with the mortality rate of 35.8 per cent at Bellevue Hospital, New York, and 37.8 per cent at the Buffalo General Hospital, Buffalo, N. Y.[1] This was during a period when type specific serums were being used to a great extent and before the advent of chemotherapy.

For Georgia the mortality rate for pneumonia in 1939, when chemotherapy was just coming into use, was 48.2 per cent, while through September of 1940 (latest figure available) when this method of treatment had become more general, it was 38.9 per cent, a decrease of 9.3 per cent. In other words, out of every 100,000 people in Georgia, 23.7 per cent fewer died of pneumonia in 1940 than in 1939. The outlook for further improvement in this picture is indeed bright.

In the United States from 1930 through 1935 there was an average of 96,500 deaths per year from pneumonia.[2] In 1939 there were 77,633 deaths; 18,867 fewer.[3] When you realize that 18,867 lives were saved from pneumonia deaths during the first year of the somewhat limited use of chemotherapy it is not at all difficult to visualize a saving of three or four times this number within a few years.

During 1939-40 the great majority of pneumonia patients at Grady Hospital, Atlanta, were treated with sulfapyridine or sulfathiazole, given by mouth or in the vein. Prior to late 1938 the pneumonia patients were treated with serum, vaccine, oxygen and other methods generally in use at that time. I have reviewed the charts of 215 pneumonia patients taken at random. These included broncho, 13 cases; and lobar, 202 cases. Since we were dealing only with adults, our youngest patient was 12 years old and the oldest was 84. The average age of all was 37.7 years, and includes both males and females.

Every case record included in this report shows both clinical and x-ray diagnoses of pneumonia. Many patients had been sick for several days before coming to the hospital. Of the 133 patients receiving chemotherapy, 15 were given the drug in the vein and the other 118 took it by mouth. Sulfapyridine and sulfathiazole have been and can be given subcutaneously or per rectum but none of our cases received the drug in either manner. The chief advantages of the intravenous route are that you are able to keep a fairly constant blood concentration of the drug and get the drug quickly into the system when, for any reason, it cannot be taken or retained by mouth. The effect on the disease seems to vary little so long as a fair blood concentration is maintained. In our patients the prognosis or the length of the disease seemed not to depend on the

Read before the Medical Association of Georgia, Macon, May 16, 1941.
From the Department of Internal Medicine of Emory University, and Grady Hospital, Atlanta.

blood concentration so long as it did not fall below 3 to 5 mg. per cent.

If any of the following conditions are observed it is best to stop the drug and force fluids:[4] psychosis, neuritis, acidosis, fever, rash, injections of scleras and conjunctivas, ocular and auditory disturbances, painful joints or stomatitis. It is imperative to stop the drug and force fluids in the following conditions: hepatitis, cytopenia, agranulocytic angina, acute hemolytic anemia, anuria or purpura hemorrhagica. The injection of scleras and conjunctivas is unreported in connection with the use of sulfapyridine but occurred in 4 per cent of the cases where sulfathiazole was used. A rash appeared in 5 per cent of sulfathiazole treated patients and 2 per cent where sulfapyridine was used. Fever occurred in 10 per cent with sulfathiazole and in 4 per cent with sulfapyridine. In all other conditions the occurrence was about the same or less frequent in sulfathiazole treated patients as compared to those treated with sulfapyridine.[4]

A low white cell count is not a contraindication to the use of chemotherapy. As a matter of fact, it is probably more important in such cases, for a low count usually indicates a low resistance on the part of the patient and such patient needs something that will act quickly in his favor. In our series of cases the highest white cell count reported on admission was 64,000; the lowest was 2,000. The average count for all 215 cases was 18,173. One patient came in with a white cell count of 2,000, was given sulfapyridine and the count gradually went up to 13,000. When he left the hospital the count was 8,900.

While I believe no absolute rule should govern the dosage of sulfapyridine or sulfathiazole, we of the hospital staff do have a basis from which we work. In the average case, if seen early, we start with a dosage of 2 grams, repeat in 4 hours and then give 1 gram every 4 hours night and day until the temperature remains normal for approximately 48 hours, then 7.5 grains every 4 hours for another 2 or 3 days. During this time the blood concentration of the drug can be determined and if need be the dosage can be increased. I believe it best to maintain a blood concentration of 3 to 6 mg. per cent. In patients in whom the disease is very severe or of long standing it may be wise to give the sodium sulfapyridine or sodium sulfathiazole in the vein. This should be made up in a 5 per cent solution in sterile distilled water and injected very slowly, not more than 4 or 5 cc. per minute by the watch. The dosage for either drug when given intravenously is figured at 0.06 Gm. per kilogram of body weight. This dose may be repeated in 6 or 8 hours. At the end of another 6 or 8 hours the patient may have shown sufficient improvement to warrant giving the drug by mouth from that point on. We have seldom found it necessary to give more than two doses intravenously. Marshall and Long[5] have shown that after an intravenous injection of sodium sulfapyridine the distribution of the drug between the blood and the body tissues is practically complete in 5 to 10 minutes after completion of the injection.

The point has been raised as to whether or not it is all right to change from one of the drugs to another. I have done this in several cases and have never noted ill effects. I have also noted in just a few cases that when one of the drugs fails to give the desired results the patient seems to respond to the other. Some observers claim better results from the use of type specific serum combined with chemotherapy. It is always advisable to determine the type of pneumonia you are dealing with before chemotherapy is started, for once the drug is absorbed it is then impossible to type the sputum. You can never know when you will have a patient who cannot tolerate chemotherapy and in such a case the serum is the treatment of choice. It is not nearly so important to know whether you are dealing with a broncho or lobar pneumonia as it is to know what type pneumonia it is or whether it is or is not pneumococcic pneumonia. However, there will occasionally come a patient from whom you cannot obtain a satisfactory specimen of sputum and in such a case the administration of your drug should not be unduly delayed.

Of our 133 patients treated with chemo-

therapy, 5 developed empyema or pleurisy with effusion while of the 82 treated prior to chemotherapy the same number, 5, developed one of these complications. Some of the conditions present in the pneumonia cases studied were: syphilis (9 cases), acute appendicitis (appendectomy), ruptured peptic ulcer, thyroidectomy, cardiac decompensation, generalized arteriosclerosis with cardiac hypertrophy, diabetes, coronary thrombosis, mitral stenosis, pregnancy and saccular bronchitis.

The average number of days spent in hospital, including complicated and uncomplicated cases, was as follows:

Prior to chemotherapy			15.9 days
With chemotherapy	Sulfapyridine	14.6	13.3 days
	Sulfathiazole	12.1	
Savings in hospital days			2.6 days

I feel sure that as our knowledge in the use of chemotherapy treatment of pneumonia increases the time spent by patients in hospitals will be materially lowered.

When a patient ill with pneumonia is first seen and his temperature is 103° F., or thereabouts, and when this patient is started on adequate amounts of chemotherapy, the fall in temperature is often dramatic. Usually it will reach normal, or very near normal, within 12 to 24 hours. In addition the patient will feel better and look better. Examination of the lungs, however, will reveal the pneumonic process usually follows the same course as in days before we had chemotherapy. X-ray films made several days after the fall of the temperature will reveal a considerable degree of consolidation still present.

Recently there has been a great deal written as to which is the better drug to use, sulfapyridine or sulfathiazole. Some writers insist that sulfapyridine is the more powerful, acts more quickly and should therefore be used. Others insist on using sulfathiazole because it causes less vomiting. Others suggest using a combination of the two, starting with 4 Gm. of sulfapyridine then giving 1 Gm. of sulfathiazole every 4 hours or alternating the two drugs every 4 hours.[6] My personal preference is sulfathiazole. The average pneumonia patient is a pretty sick individual, though as a rule not nauseated and vomiting. If such patients are given a drug that causes nausea and vomiting and makes them more sick than they are, they become quite apprehensive. If your patient can be given a drug which will bring about the desired results, even though it may take a triflle longer, and not cause unpleasant symptoms, then I feel that is the drug to use. However, I quite recently had a patient, a man aged 60, with lobar pneumonia, type undetermined, who took sulfathiazole for 30 hours with no effect on his temperature or his sense of well-being. His sulfathiazole was omitted and he was given sulfapyridine. Four hours after his first dose of sulfapyridine the temperature dropped 1.2 degrees and then gradually came down to normal. The sulfapyridine caused some nausea and one attack of vomiting. His recovery was otherwise uneventful.

The need for oxygen in treating pneumonia patients is not so great now as it was before the advent of chemotherapy. A great saving to the patient has been realized in this item alone. However, there are occasional patients who will do better with oxygen. It is especially indicated in certain cardiac cases and often adds materially to the comfort and sense of well-being of the patient. If the oxygen tent is not available the results obtained by giving oxygen through the nasal tube are quite satisfactory.

I believe that sedation in pneumonia patients is very important and for this purpose we have a most valuable drug in phenobarbital. When there is much pain present morphine is the drug of choice and will usually give the desired results. It should be given in large enough dosage and repeated often enough to produce results but discontinued as soon as is consistent with good judgment. Sufficient fluids should be given to produce and maintain proper hydration. These fluids can, of course, be given in the vein when advisable and in the form of a 2½ or 5 per cent solution of glucose. In many instances it will be advisable to give one or more injections of a 50 per cent glucose solution, 50 cc. at a time. Approximately 3,000 cc. of fluids per 24 hours is the desirable amount in the average case.

The diet should not be confined to liquids except perhaps for the first 24 hours. A simple soft diet is well tolerated and induces the formation of less gas in the bowel than does a liquid diet. Proper attention to bowel function is important, for a distended abdomen is especially bad for a patient with pulmonary disease. It is well to remember not to give magnesium sulphate or similar preparations when the patient is receiving chemotherapy.

Practically all writers have stressed the importance of early treatment in pneumonia. This disease is a medical emergency. In one of our type 3 cases (there were 7 in all) the patient had evidently had pneumonia eight days before coming to the hospital. He was given sulfapyridine but died at the end of the first day. Another patient was sick with "a cold and fever" two weeks before admission; he also died in spite of chemotherapy. We simply cannot expect any drug to work satisfactorily in a patient who has been ill with the disease for several days. The results obtained with chemotherapy as compared to those obtained prior to chemotherapy are shown in the accompanying table:

RESULT OF 133 PATIENTS WITH PNEUMONIA TREATED WITH CHEMOTHERAPY

Type	*Number Cases*	*Fatal Cases*	*Mortality %*
1	23	3	13
3	7	1	14
4	2	0	—
5	11	1	9
6	2	0	—
7	9	0	—
8	4	0	—
9	2	0	—
16	1	0	—
25	2	0	—
29	1	0	—
1 & 6	1	0	—
3 & 5	1	1	100
Not Typed	67	6	8.9
Total	133	12	9.02

RESULT OF 82 PATIENTS WITH PNEUMONIA TREATED PRIOR TO CHEMOTHERAPY

Number Cases	*Fatal Cases*	*Mortality %*
82	21	25.6

From this table you see we had a reduction of 16.58 per cent in the mortality rate in chemotherapy treated patients as compared to those treated before the advent of chemotherapy. There are two things that will greatly help to further reduce the number of deaths from pneumonia: one is the increased knowledge we are gaining in this new procedure and the other is early institution of treatment. The latter problem, I believe, is more a question of bringing the patient and doctor together than it is educating the doctor to institute the treatment.

Summary

1. A review of 215 case reports of pneumonia is reported.
2. Eighty-two of these patients were treated prior to chemotherapy, and 133 with chemotherapy; the mortality rate in the former being 25.6 per cent and in the latter 9.02 per cent.
3. Contraindications for continued use of chemotherapy in any given case are enumerated.
4. The importance of early and adequate treatment is stressed and a general discussion of treatment is given.
5. Statistics on the number of pneumonia deaths in Georgia and in the United States are given.

701 Hurt Building.

REFERENCES

1. Gray, J. D., and Fulton, M. C.: J. M. A. G. 27:419-420 (Nov.) 1938.
2. Pub. Health Rep. 1938.
3. U. S. Department of Commerce (Dec. 17) 1940.
4. Chemotherapy for Infectious Diseases and Other Infections, Circular Letter No. 81, J. A. M. A. 116:513 (Feb. 8) 1941.
5. Marshall, E. K., Jr., and Long, P. H.: The Intravenous Use of Sodium Sulfapyridine, J. A. M. A. 112:1671 (April 29) 1939.
6. Gaisford, W. F., and Whitelow, W.: Sulfathiazole in Treatment of Pneumococcic Lobar Pneumonia, Lancet, London, 2:443-474 (Oct. 12) 1940.

DISCUSSION ON PAPER OF DR. AVERY DIMMOCK

Dr. W. W. Chrisman (Macon): Dr. Dimmock has given you in the brief time allotted him a concise yet comprehensive contribution to a rapidly accumulating mass of clinical experience from which most of us should profit. Whenever a new therapeutic agent is placed at our disposal we should have frequent dissertations which acquaint us with its virtues, its limitations and its dangers. We of today have witnessed and contributed to an evolutionary theory which has relegated time honored procedures and even sera into the discard and given in their stead chemotherapy as the method of choice in treating pneumonia. Spectacular have been the results, yet I am of the opinion that we are on the threshold of even more effective chemical compounds.

I regret that clinicians cannot give greater recognition and credit to chemists and researchers for their miraculous discoveries.

Our essayist has given comparative statistical data, numerically large and complete case analyses and most practical suggestions of routine treatment. With all of these I am in full accord. If anything of importance has been omitted or not emphasized, I am sure it was because of time limitations.

I was surprised to learn that the mortality from pneumonia in Georgia in 1938 was 48.2 per cent. This is regretfully high. Dr. Dimmock leaves the impression that he prefers sulfathiazole. I personally prefer and use sulfapyridine. His preference is based on the freedom from nausea. I have had no particular difficulty in this respect. Usually, when nausea occurs, a sufficient amount of the drug has been given to bring about a reduction of temperature to a level which permits omitting the drug for a few hours or reducing the dose. My preference is based upon happy results with sulfapyridine where sulfathiazole apparently had failed. I have seen no distressing side effects from sulfapyridine. With sulfanilamide I have had two patients who developed extreme leukopenia and agranulocytosis. These were reported to Dr. Jackson of Boston who is collecting statistics on agranulocytosis. I would not have you believe any one of the sulfa-compounds always effective nor that anti-pneumococcic sera are entirely in the discard. In some cases a combination of both is sometimes effective and we may yet come to use both in certain types of pneumococcic infection. We should not abandon entirely the old until the new has proven its full value. As for the dosage, I have no routine. There are too many variable factors. It is of course necessary to know the safe, effective therapeutic dose, to acquaint ourselves with all the undesirable toxic effects and obligatory to watch for same. Many variable factors enter into this triad. We must consider the age and sex of the patient, his or her general physical condition, the temperature curve, leukocyte and differential count, positive or negative blood culture and, most important, an evaluation of the toxemia of the patient. Of all these, I consider most important, one's ability to recognize and evaluate toxic manifestations.

No mention has been made of the indiscriminate use of these drugs. As a matter of fact, when we administer them for respiratory infections when the temperature persists longer than expected, we cannot be sure there are not microscopic pneumonic areas. It is possible we may find prophylatic indications for use of the sulfa-compounds.

Dr. W. M. Cason (Sandersville): I want to thank Dr. Dimmock for his excellent presentation of this very stimulating paper on the present-day treatment of pneumonia.

For many years pneumonia has ranked third as a cause of death in the registration area of the United States with an average of more than 100,000 deaths a year.

However, improvement in pneumonia therapy has been advancing in recent years at a breath-taking pace. Life saving agents have become available in rapid succession for increasing proportions of cases of this important and highly fatal disease.

We had hardly become acquainted with the use of anti-pneumococcic horse serum for the most common types of pneumonia, namely, types numbers I and II when the classification of the pneumococci formerly included in Type IV uncovered new types. This was very rapidly followed by refinements in laboratory technic culminating in the much simpler Neufeld method of typing, increasing the diagnostic efficiency that is so essential for early treatment.

Almost immediately therapeutic antipneumococcic rabbit serums were introduced and the scope and effectiveness of antibody therapy were still further increased.

The appearance of excellent reports of treatment with these sera almost coincided with the introduction and rapid spread of the use of another class of drugs—the sulfonamide derivatives.

Our recent experience with the use of sulfapyridine and similar compounds has taught us that this type of therapy has a wide range of effectiveness, is relatively inexpensive, is simple to administer, and when properly used and controlled has a wide margin of safety.

Having these two entirely different therapeutic remedies for the effective treatment of pneumonia we ask ourselves can we be of greater benefit to our pneumonia patients by administering specific serum or by chemotherapy or by a combination of both? Most of the reports seem to indicate a superiority of sulfapyridine or sulfathiazole alone over serum and over the combination of serum and chemotherapy.

Chemotherapy is of extraordinary value in that it permits treatment to be instituted at once and the value of its use can be determined in 48 to 72 hours. One should, as Dr. Dimmock has advised, always type the sputum if possible before giving sulfapyridine or sulfathiazole and if it is not effective in 48 hours or at most 72 hours specific serum should be administered.

As regards complications, in our experience, neither sulfapyridine nor sulfathiazole increases complications.

It is interesting to note Dr. Dimmock's approval of changing from one drug of this group to another. The literature is abundant with reports of clinicians who have changed from sulfapyridine treatment to sulfathiazole treatment and one should have no hesitancy in doing this should the drug being given produce no response after 48 hours of treatment. During the past winter at the U. S. Naval Air Station, Jacksonville, Florida, 17 patients with pneumonia were treated with sulfapyridine, and 20 treated with sulfathiazole with no fatalities. Of course this is not unusual since our patients were primarily young, healthy, vigorous males.

We were glad to hear Dr. Dimmock say that a low white cell count is not a contraindication to the use of chemotherapy for such has been our experience. However, with colored patients, in our experience, sulfapyridine has been just as well tolerated as sulfathiazole.

One should remember that it is a mistake to continue chemotherapy more than 72 hours if no improvement is produced by the drug. In the treatment of these patients chemotherapy should be discontinued and specific serum administered.

Sulfapyridine and sulfathiazole are capable of producing leukopenia and neutropenia. However, almost all cases reported appeared only after the treatment was continued for two weeks or longer and after 50 grams or more of the drug were given.

In our practice we have made it a rule to discontinue chemotherapy after 35 to 40 grams of the drug have been given, regardless of the condition of the patient.

Dr. Dimmock's suggestion of maintaining 3 to 6 mg. per cent concentration of the drug in the blood is the one generally accepted but in treating type III pneumonia the disease cannot be controlled unless the concentration is kept very near the latter figure.

Whitmore, Royster, and Rudel of New York report that it is safe to give 2 grams of sulfapyridine in 20 cc. normal saline intravenously. This is a 10 per cent solution. They have given 4 grams in 20 cc. normal saline intravenously without untoward effects but they do not advise the latter strength solution for intravenous administration.

Whitehead and Carter of Juneau, Alaska, report inhalations of oxygen under oxygen tent for 30 minutes before and 30 minutes after each dose of sulfapyridine relieved nausea and produced marked alleviation of cyanosis.

As regards accomplishments with the present-day treatment of pneumonia it may be most conservatively estimated that the case fatality rate in all pneumonias can be cut to at least half by the best present-day therapy. Most of the reports would sugesgt that the case fatality rate might be reduced to one-fourth or even less with chemotherapy alone.

However, at the present time it is not to be assumed that the last word in the specific treatment of pneumonia has already been said. There is still room for improvement, and, as the search for other and hetter chemicals and for new avenues of approach continues, further progress may be anticipated.

WARNING ON 'ATHLETE'S FOOT' TREATMENT

Until the conclusion of studies to determine the extent of the causticity of a mixture of phenol and camphor, recently hailed as "A Working Cure for Athlete's Foot," and its possible benefits and dangers, "treatment of 'athlete's foot,' ringworm and other fungous infections [with this mixture] or any other potent remedies is best intrusted to the qualified physician," *The Journal of the American Medical Association* warns in its May 9 issue. It has been warned that the mixture should not he applied to a wet skin since water has been reported to make it caustic.

Pointing out that most cases of fungous infection require persistent skilful attention if the disease is to be brought under complete control, *The Journal* says that "Recommendation that untrained people use on themselves an agent which has the potential danger of causticity is highly doubtful."

The Georgia Department of Public Health has within the last few weeks completed plans to extend a venereal disease control service to every county in Georgia. These plans include the appointment of itinerant public health nurses to cover the 38 counties of the state which do not have public health nursing service of any kind.

THE CHOICE OF AN ANESTHETIC

WM. PERRIN NICOLSON, JR., M.D.
Atlanta

March 30 next (1942) will mark the centennial of the first use of sulphuric ether as a surgical anesthetic, and during the intervening one hundred years improvements and refinements have been so numerous that anesthesiology is now a recognized specialty. Time does not here permit a detailed consideration of the virtues and faults of the various anesthetic agents, and combinations thereof, even if the writer were capable of so doing. To point out certain factors from the point of view of the surgeon which guide one in choosing an anesthetic; to discuss these factors, and to describe the combinations and technic which have been chosen as our routine anesthetic will be the purpose of this presentation.

The same problem did not face Crawford W. Long in 1842. His was a pioneering task, ours one of refinement. He sought to temporarily abolish pain—we to accomplish the same purpose with more safety, comfort and dexterity. No one agent, nor combination of agents, has proven so superior to all others that it should be adopted for universal use. Each possesses merit—some more than others—and circumstances alter our choice for any particular case—these may be physical, economic, intellectual or personal.

What is an ideal anesthetic? It is one which abolishes all pain, *pro tempore*, with adequate relaxation, and with minimum damage to the tissues and organs of the patient. Pain may be physical or psychic—the former can be controlled with one of the local anesthetics, by infiltration; by nerve block; or by spinal, but the latter can be accomplished only by obtaining anesthesia as well as analgesia. Many cases do not require this; circumstances, physical or economic may not justify it; personnel necessary may not be available and in such instances local anesthesia is indicated. One

Read before the Medical Association of Georgia, Macon, May 16, 1941.

anesthetist can look after many more patients simultaneously with local than with general anesthesia, which undoubtedly accounts for its greater uses by large clinics and hospitals, than by the individual surgeon.

To attain an "ideal" the following factors enter:

(a) Safety
(b) Comfort
(c) Complications
(d) Effectiveness
(e) Controllability
(f) Familiarity
(g) Availability
(h) Expense

Safety

The difference between the amount of an anesthetic agent sufficient to produce surgical anesthesia and death is the margin of safety of that agent. The greater the difference the safer that anesthetic. There is also danger of explosion with some, so much so that some states prohibit the use of explosive gases in any state institution. Explosions have occurred in those localities where static electricity is favored by climatic conditions. The age of the patient may influence the factor of safety.

The safety of an anesthetic also varies with the systems involved, e.g., some are known irritants of the kidneys; some produce hepatic damage; others either lower or raise blood pressure, etc.

Comfort

This should be considered under two phases:

(a) Preoperative
(b) Postoperative

Preoperatively the greatest trouble is psychic. A fully conscious individual not familiar with hospitals or surgical procedures dreads the interval of waiting to go to the operating room—like a doomed man awaiting his executioner—and then the suffocating experience of inhaling some anesthetic until unconsciousness supervenes. The night of waiting will be a restless one and the patient exhausted nervously before he ever goes to the operating room unless something is done to prevent it. Anything which reduces these psychic traumas minimizes the discomforts of the operation and anesthetic.

The chief postoperative discomforts are nausea and vomiting, distention, and inability to void. Each depends to a large extent on the nature of the operation, on the amount of opiates required for the relief of pain, and on the duration of the anesthesia and the anesthetic agent used.

Complications

(a) Infection: These are more frequent following local infiltration anesthesia, since the tissues are thus devitalized. When there is a known infection, local should be used with great caution because of the possibility of spreading the infection and also because it is much less effective in the presence of pus.

(b) Pulmonary: These may be due to the anesthetic used, or to the nature or length of the operation. An irritating inhalation anesthetic for instance is more likely to set up an inflammation—pneumonitis or pneumonia—than one of the less irritating ones. On the other hand the occurrence of an atelectasis is determined more by the nature of the operation, position of the patient on the table and the duration of the anesthesia than by the nature of the anesthetic used.

(c) Nephritis: Those anesthetics excreted by the kidneys will naturally be contraindicated in cases showing nephritis.

(d) Hepatitis: Damage to the liver results from all anesthetics, but more from some than others. Chloroform, for instance, has a definitely bad effect on the liver, and in a prolonged anesthesia, or where repeated short anesthetics must be given over a period of a few weeks, it should be avoided.

Effectiveness

This factor varies with the result desired. In fractures and in abdominal cases relaxation is required. In some, such as gunshot or stab wounds of the abdomen, a collapsed intestine in addition to the relaxation is very helpful. I well remember the difficulty experienced in exploring a pancreas

because a spinal anesthetic had not been used. In other cases, such as breasts, surface tumors, plastic operations, etc., no relaxation is required.

Controllability

Inhalation anesthetics can be controlled easily, but those given orally, intravenously or per rectum cannot always be controlled. Unless some adequate "antagonist" is available, their use is dangerous.

Familiarity

It is essential that both anesthetist and surgeon be familiar with the anesthetic used —with its possibilities, capabilities and its dangers. The best anesthetic in familiar hands becomes a hazardous one with inexperience.

Availability

This factor enters into the picture particularly at this time because the army must consider weight and bulk. In the past chloroform has been used more extensively in army field work because it is less bulky and requires less, and therefore can be supplied to the troops in the field more readily. For the same reason local anesthesia is used more in army hospitals than civilian.

Expense

Not only of the agent, but also of the apparatus needed and training of the anesthetist enter into the picture. This item is of particular interest to the industrial surgeon.

So much for the desired qualities of an anesthetic — there are also considerations involving the patient which govern our choice of an anesthetic. The physical and psychic conditions; the nature of the operation to be performed; the relaxation which will be required; the anticipated duration; the existence of known pathologic lesions, e.g., nephritis, high or low blood pressure, liver damage, pulmonary inflammation, etc. The best rule here as elsewhere, is the golden one — under simi'ar circumstances what anesthetic would *you* take?—and following this rule always pays.

Since July, 1936, our choice for a routine anesthetic has been the use of evipal soluble per rectum as a basal anesthetic, as recommended by Gwathmey, and supplemented by local or gas and rarely ether. The patients without exception have been delighted with the results. In at least 90 per cent on awakening in the afternoon their first question is, "When am I going to the operating room?"—and having applied the golden rule, I can testify from personal experience, of its lack of unpleasant incidence. It more nearly fulfills the requirements of an "ideal" anesthetic than any other—and the modern tendency is to a combination of anesthetics rather than their separate use. The technic is so simple, and the results so good, it seems strange this combination is not more generally used. To paraphrase a well known automobile manufacturer, "Ask the man who has taken it."

The night before the operation the patient is given a hypnotic (usually 3 grains of seconal) and two hours before the operation a cleansing soda enema is given. One hour later a preliminary hypodermic of atropine sulphate gr. 1/150 and pantopon gr. 1/3 is given. (In some cases dilaudid gr. 1/16 was used instead of pantopon, but in these the number showing embarrassing respiratory depression was greater). Twenty minutes later, or forty minutes before the operation, the required dose (0.2 cc. of a 10 per cent solution per pound of body weight with a maximum of 30 cc.) of evipal is rapidly injected into the rectum through a small catheter, followed by a few cubic centimeters of distilled water. The catheter is clamped and left in the rectum. The patient usually feels the need of a bed pan, but in a few minutes goes to sleep and unless he weighs more than 150 pounds (maximum dose) rarely remembers the trip to the operating room.

There has been no death even remotely attributable to the anesthetic. The preoperative and postoperative comfort have been greater, the complications distinctly fewer and the relaxation adequate. The depth of anesthesia is controlled by giving metrazol or coramine when needed. It is readily available and the slight increase in expense for the evipal is more than offset by the smaller amount of gas required.

It most nearly approaches the "ideal" of any I have used. The only really legitimate criticism of it has been an economic one. These patients usually require more constant attention for the first twelve hours and hence the number of special nurses used is larger.

Comment

An outline of the factors involved in the choice of an anesthetic has been given with a description of the use of rectal evipal and gas combination being the best for a routine anesthetic. Some of the snares and pitfalls have been pointed out, and the preoperative and postoperative comfort of the patient considered.

Conclusions

1. Anesthesiology is a specialty requiring extensive knowledge and experience.
2. Choice of an anesthetic depends upon many qualities possessed by the agent to be used, as well as the condition, physical and psychic, of the patient and the nature of the operation to be performed.
3. A combination of anesthetics is better than a single one.
4. Rectal evipal as a basal supplemented by a local or general anesthetic is my choice for a routine anesthetic.

DISCUSSION ON PAPER OF DR. WM. PERRIN NICOLSON

Dr. Hayward Phillips (Atlanta): The choice of an anesthetic is a very timely subject. I am glad Dr. Nicolson has chosen this theme at this time, and has presented it to you so well.

It is indeed encouraging to see surgeons really interested in the type of anesthetic best suited to a particular case.

The day of a routine anesthetic, however, is a thing of the past. Today, one hundred years after the first use of an agent as an anesthetic, we have a choice of agents; also the choice of the method of administration and, most important of all, the skilled administrator. It is of the skilled administrator I want to speak particularly. He is one of who knows the physiology of the human body, the physiologic action of the anesthetic agents used, and who can properly interpret the reactions of the organs of the body to these agents when administered. I heartily agree with Dr. Nicolson in the statement that no single agent or combination of agents is so superior to any other, that it can be adopted for routine use. We are well aware that the combination of two or more agents comes more nearly giving us the ideal anesthetic. This is referred to as balanced anesthesia.

When choosing an anesthetic, I should be more careful in selecting the administrator than the agent to be used. In other words, use that agent for your anesthetic which is most familiar to the administrator. Ether is the safest in unskilled hands, while a combination of agents, in skilled hands, will be the best for the patient, and will give the surgeon more desirable conditions under which to do his work.

For convenience, local infiltration and regional anesthetic procedures will be found most applicable under many circumstances.

The technic which Dr. Nicolson uses is a good procedure in many instances. When it works satisfactorily it is most pleasing to the patient and most gratifying to the surgeon.

The fact that all agents administered per rectum are uncontrollable, renders them unreliable and thus unsatisfactory. One can never be sure of obtaining the physiologic action of the agent by this method, because we can not determine the degree with which it will be absorbed. It seems to me that a method where the physiologic action of the drug can be controlled more accurately would give the most satisfactory results.

Sodium pentothal, administered intravenously by a medical anesthetist, is controllable and safe. It may be given to apprehensive psychic, nervous patients in their room, leaving the needle in the vein while transferring them to the operating room. Or it may be administered for the induction, after the patient is placed on the operating table, after which any other agent or procedure may be combined with it to give the balanced anesthetic.

We have used this method in combination with cyclopropane, nitrous oxide, ether, regional, spinal, abdominal and field blocks.

At the end of the operation, usually a small additional amount of pentothal is given for its hypnotic effect, thus giving the patient a very pleasant awakening after a period of twenty to thirty minutes. By this procedure the incidence of postoperative nausea and vomiting has been greatly reduced. We have had most gratifying results with this method especially in the poor surgical risk.

The administration of anesthetics by skilled administrators need not be an economical hindrance to the patient; it has been definitely proven that there is reduction in morbidity and a shortening of the hospitalization period when the anesthetic is given by a skilled administrator, as compared to those given by unskilled individuals.

As Dr. Nicolson suggests, let us truly apply the Golden Rule. Evaluate your patient as to surgical risk. Select your anesthetic best suited for that patient at hand, that agent which will give the best operative conditions to the surgeons. Determine from the skill of the administrator which agent and which method will best fulfill the above requirements.

Dr. Lon Grove (Atlanta): I would like to emphasize one point in connection with Dr. Nicolson's paper, and

that is, when procedures, new to some of us, are introduced, we should not be too quick to criticize. I heard some criticism of this paper before it was even read. I remember, when spinal anesthesia was first being used in the South, certain ones were so antagonistic, that a great proportion of the profession, and even some of the laity, became so prejudiced that now, at a time when we know more about spinal anesthesia and know that it can be made reasonably safe, we are finding it difficult to use. We should wait until we have had more personal experience before we are too critical. There was a child who died, in Atlanta, a few days ago while under ether anesthesia, and I made the statement that had it occurred under spinal or intravenous anesthesia, the anesthetic would have been condemned, but as ether was being used, it was accepted as one of those unexplained tragedies.

Dr. B. H. Minchew (Waycross): Dr. Nicolson's reference to sodium pentothal interests me because this is a method we can employ in certain types of surgery in opthalmology, giving us a safe anesthetic and at the same time removes the inconvenience of the inhalation method from our operative field. We have done two enucleations of the globe recently using sodium pentothal. The ease with which this can be done over the method of inhalation justifies its choice. I do not think, however, it is a safe method to employ in nose and throat surgery because of the emergencies which we have to anticipate with the respiratory tract. It is an excellent method of anesthesia for mastoid operations. With a careful anesthetist who will watch for the respiratory difficulty sometimes encountered sodium pentothal will become a very useful aid in our surgical efforts.

Dr. W. A. Selman (Atlanta: For ten years or more when I began the practice of medicine, I gave anesthetics and it has been a subject of great interest to me from the study of it at that time. Since that time there have been so many improvements both in safety to the patient and convenience to the patient after operation—and that is one point I came up to emphasize—over the types we used then. After some of the newer anesthetics, intravenous types of anesthesia, as a rule there is no postoperative nausea, no struggle like ether in going under or coming out from the anesthetic, and that is a point of great interest to the doctor and the patient. You can tell a patient that there will be no struggling, that as a rule there is no postoperative nausea and that they will sleep for some length of time following the anesthetic, and that is a comfort to the patient and to the patient's friends and to the surgeon. Most patients who have the intravenous type of anesthesia come out of it and praise it because of the fact that they went under it before they knew it was being given and came out with such ease that if they have to take another, they want the intravenous type.

Before this intravenous type I gave many more spinal anesthetics than I do now. For certain types of work, I think there is nothing better for a quiet abdomen in which there is no distention, no effort of intestines to get out of the abdominal wound, than spinal anesthetic. You have got to time that, however, unless, as Dr. Nicolson said, in the finer adjustments of that now, it is given continuously and that, of course, is a great advantage.

I enjoyed this paper and the only other point, I'd say, is this—that our trained anesthetists now enable us to take our minds off the anesthetic and to concentrate our thoughts on the patient.

Dr. Nicolson: I want to thank the gentlemen for their very interesting discussion. I really didn't know that many people stayed over or were here. I brought one man down with me to try to be sure that two people were here. I knew someone was to read a discussion but I was not sure he would be here so I brought a stool pigeon, but I see he got here.

Dr. Phillips, in his discussion, was saying what I tried to say, but in many ways more eloquently.

I appreciate a man specializing in anesthesiology coming down and giving such an excellent discussion.

I don't think that the lack of controllability is a valid objection to evipal. I know you can't tell exactly how much is absorbed from the rectum or how high it goes, but for all practical purposes, as stated by Gwathmey, it can be controlled by giving metrazol or coramine as indicated. The only legitimate objection that I have found to using rectal evipal is the economic one. These cases more frequently require the attention of a special nurse for the first twelve hours because they remain unconscious longer.

It wasn't intended to bring up a controversy as to what type of anesthetic should be used. About four years ago at a meeting of the Southern Surgical a paper was read on spinal anesthesia and it had been reported that a questionnaire had been sent to a large series of patients who had had an operation under spinal anesthesia asking if they had to have another operation whether they would have spinal or not, and the vast majority said they would; and to those who had had general anesthetic more than half said if they had to have another operation they would have spinal. The majority of us who didn't use spinal in their cases, as Dr. Selman indicated, felt very uncomfortable and that it was almost criminal not to use spinal. The discussion had gotten rather heated but nobody said anything against it. Finally Dr. Hubert Royster got up just as the chairman was attempting to bring the discussion to a close. Dr. Royster said, "I only want two minutes. We are all surgeons. I want to ask for a show of hands. How many of you present, if you had to have an operation, would have spinal anesthetic?" About three stuck up their hands. Then he said, "How many would have general?" Most of them held up their hands. He suggested that they follow the Golden Rule. As far as I am personally concerned, I wouldn't take a spinal anesthetic. However, I didn't want to raise a controversy.

Dr. Minchew spoke of the importance of intravenous anesthesia in certain types of cases and certainly intravenous is more valuable in eye surgery than any other.

Again, I thank the gentlemen for their generous discussion.

CONGESTIVE HEART FAILURE

William Harbin, Jr., M.D.
Rome

The subject about which I shall talk this afternoon is congestive heart failure. There are several reasons why I chose such a common condition with which all of you are familiar. My experience has been that practicing physicians do not always have, first, a clear conception of the mechanism of heart failure; second, that this condition may not be correctly diagnosed in its early stage, and third, that such physicians are not always aware of the good results which are obtained after proper treatment. With these reasons in mind I shall say something about the differential diagnosis of heart failure, its mechanism and treatment.

Congestive failure may be defined as that condition of the heart in which it is unable to maintain an efficient circulation during rest or moderate exercise. At this time we are not interested in the cause of failure, whether it be a valvular defect, hypertension or myocardial infarction but shall confine our attention to the state of the heart muscle and how efficiently it can work. It is important to recognize the onset of failure, regardless of the cause, and to treat it correctly. Although there are many causes of heart disease, rheumatic fever for instance, for which we are able to do very little if anything, after congestive failure develops the treatment of this condition is very gratifying even though it be the terminal stage of heart disease. Patients should by all means have the advantage of what can be done since they may live longer in reasonable comfort. While caring for a patient with heart disease a physician may be so occupied with the underlying cause, about which he can do very little, that he may not recognize and treat failure promptly as it develops.

Peripheral circulatory failure, sometimes called "shock" or "collapse", is incorrectly diagnosed as being heart failure probably more than any other one condition. It is found with infections such as pneumonia, puerperal sepsis and with other miscellaneous conditions; namely, diabetic coma, following hemorrhage, surgical operations and severe trauma. Patients who die under these circumstances expire at the time the heart stops beating but death is not due to heart failure primarily. In this condition there is a decrease in the circulating blood volume with an inadequate return of blood from the periphery to the heart, due to stagnation in the capillary bed and small veins. These patients are usually cyanosed, have a rapid pulse, a decreased venous pressure, a lowered blood pressure and an anxious facial expression. Certainly when they are first seen, unless this condition is understood, they may be given digitalis and treated as if they had congestive failure. Such treatment is not warranted and is probably harmful. Much discussion as to the advisability of using digitalis in the routine treatment of pneumonia has been going on for many years. The evidence which is available at this time should end this controversy as digitalis has proven to be useless in peripheral failure and should be used in pneumonia only if congestive failure is present or anticipated. The same is true in attempting to combat shock associated with the other conditions mentioned, as it is not possible to slow the heart rate or improve the circulation with digitalis.

There are a number of other conditions which may be confused with heart failure, chiefly asthma, bronchitis, low grade pneumonic infections, nephritis with edema and cirrhosis of the liver with ascites. Differentiating these conditions is usually possible by the use of common clinical and laboratory measures but occasionally the problem is difficult. When such is the case it is well for practitioners to know that there are two simple tests which are helpful in the diagnosis of congestive failure. These clinical tests are: first, a rough determination of the venous pressure, and second, a measure of the velocity of the flow of blood from the arm to the tongue.

To understand congestive failure it is necessary to know something about the mechanism which produces it. The general belief now is that it is due to back-pressure,

Read before the Seventh District Medical Society, Rome, Sept. 24, 1941.

referred to as "backward failure," rather than to an insufficient output of blood to the tissues, which is called "forward failure." At this time there will be no discussion of these two theories. It will be sufficient to say that practically all of the recent information obtained about the nature of failure indicates that it is due to back-pressure.

Failure of the right or left ventricle should be distinguished even though both chambers are usually involved. To illustrate left ventricular failure let us follow the chain of events in a patient with long standing hypertension. To expel blood under increased pressure the left ventricle dilates and hypertrophies to improve its contracting power. In time the pressure in the left auricle increases. This is followed by increased pressure in the pulmonary circulation, producing congestion. Later pulmonary edema develops and finally hydrothorax. Symptomatically, shortness of breath with exertion appears first, occasionally the dyspnea will begin at rest, particularly at night. Shortly thereafter the respiratory distress becomes severe.

An increase in pressure in the right side of the heart usually follows these changes in the pulmonary circulation. The reason failure of the right ventricle usually follows failure of the left ventricle is because a majority of the causes of cardiac disease are of such a nature as to impose an initial strain on the left ventricle. These conditions are hypertension, disease of the coronary vessels of the left ventricle and valvular lesions in the left side of the heart. Occasionally the primary process may affect the right side of the heart, in the presence of chronic pulmonary disease, congenital deformities, tricuspid disease or adhesive pericarditis. Failure of the right side of the heart produces systemic congestion with the following signs: venous distention with increased venous pressure, peripheral edema. enlargement of the liver, ascites, albuminuria and cyanosis. From a clinical viewpoint as a rule one will first find failure of the left ventricle with the pulmonary phenomena which have been mentioned or more frequently, combined right and left failure with systemic signs and symptoms in addition to those affecting the pulmonary circulation.

In the absence of symptoms indicating the presence of failure, there are two physical signs which infer that it is present or impending, a gallop rhythm and pulsus alternans. When present they may be of considerable significance. Gallup rhythm is noticed when the heart is examined with a stethoscope, while alternating strong and weak contractions are easily detected with a blood pressure instrument.

The object in the treatment of heart failure is to prolong life and to increase the comfort and usefulness of the patient. No complete cure, as is obtained in certain other diseases, is to be expected although symptomatic recovery often takes place. It is not uncommon to see a patient with congestive failure, not too severe, go along for several years leading a moderately active life and being reasonably comfortable. Death, when it does come, may be due to some other cause, often renal failure.

Digitalis has a specific action and is the most important drug used in the treatment of this condition. It is indicated regardless of the cause of the heart failure, whether the blood pressure is high or low, whether the pulse is regular or irregular. It is usually not possible, as some of us have been told, to figure the exact dose of digitalis needed, based upon the weight and age of the patient. The effect of digitalis varies with different individuals and the dose should be governed to a certain extent by two things: the production of the desired effect and the appearance of toxic signs or symptoms. In an occasional case, the electrocardiogram is of value in deciding whether or not a patient is digitalized. It is, of course, possible to have a general idea as to the amount of this drug which a patient will need. The average adult who has not been taking digitalis will need 20 to 25 grains to be digitalized when it is planned to give this dose over a period of 3 or 4 days. When a patient is in a serious condition, let us say with acute pulmonary edema, digitalis intramuscularly or intravenously should be given. The emergency should determine the size of such doses,

keeping in mind that digitalis given parenterally has almost double the effect of digitalis given by mouth. The prompt administration of this drug intramuscularly or intravenously occasionally saves a life.

Moderately severe cases should rest from 2 to 4 weeks or if the failure is slight, a decrease in activity with periods of rest will suffice. The patient should not be compelled to rest in bed as it has been recently shown that in certain cases this is not only unwise but may be harmful. Bed rest may cause a shift of fluid from the lower extremities to the lungs and in this latter location additional fluid increases the patient's distress and is dangerous. Rest in a chair is then preferable. From a practical viewpoint I think it is wise to allow the patient to help the physician to decide what position improves his comfort.

The use of mercurial diuretics, alone or combined with theophylline, is routine if there is as much as a moderate amount of congestion present. If these drugs do not produce the desired effect when injected intravenously, ammonium chloride should be administered by mouth to improve and prolong their effect. Such diuretics should not be used when acute nephritis is present and should be given with caution if the nonprotein nitrogen in the blood is above 50 mg. per 100 cc. No doubt all of you are familiar with the dose of these drugs, the frequency with which injections should be given and know that they can be used over long periods of time with beneficial effect.

The fluid intake of the patient is important and to begin with should be limited to 1000 or 1200 cc. daily. The good to come from diuresis may be offset by not restricting the ingestion of fluid.

Excessive purgation should be avoided as it is too wearing upon the patient. In some cases I find an occasional small dose of calomel beneficial; it makes the patient feel better and fewer injections of mercurial diuretics are necessary.

At this time nothing will be said about other important therapeutic measures such as sedatives, the use of oxygen, the withdrawal of fluid from serous cavities and the occasional need for a phlebotomy.

Heart failure due to certain curable conditions will disappear when the cause has been eradicated; such diseases include thyrotoxicosis, myxedema and a deficiency of thiamine chloride. The results in these conditions will be dramatic and although they are not common, the fact that they are curable increases their importance.

In conclusion it may be said that understanding the nature of congestive heart failure and its proper treatment may add much to the lives of individuals so afflicted and in view of the relative increase in cardiac disease, knowledge about this common condition becomes more important.

MEDICAL ASSOCIATION OF GEORGIA

Balance Sheet

May 1, 1941, to March 31, 1942

INCOME

May 1, 1941:		
Fulton National Bank, Atlanta, Cash Subject to check	$12,263.61	
Fulton National Bank, Atlanta, Savings—History Fund	1,303.86	
Standard Federal and Savings Loan Association, Atlanta	5,000.00	
Citizens & Southern National Bank, Atlanta—Savings	5,302.53	
First National Bank, Atlanta, Savings	5,261.94	
Six $1,000 U. S. Government Savings Bonds	4,750.11	
Four $1,000 U. S. Government Savings Bonds	3,116.00	
Bonds and cash in banks		$36,998.05
Receipts from Operations		
Dues	$ 9,490.40	
Advertising	6,131.31	
Exhibits	2,004.25	
Public Relations Bureau	1,453.25	
Subscriptions	72.85	$19,152.06
Interest Collected		
Standard Federal and Savings Loan Association, Atlanta	$ 159.89	
Fulton National Bank, Atlanta, Savings—History Fund	13.07	
Citizens & Southern National Bank, Atlanta—Savings	53.15	
First National Bank, Atlanta, Savings	52.74	
Six $1,000 U. S. Government Savings Bonds	119.63	
Four $1,000 U. S. Government Savings Bonds	79.75	$ 478.23
Total		$56,628.34

Disbursements

Expenditures (Itemized statement attached)		$19,939.75
Cash on hand and bonds:		
Fulton National Bank, Atlanta—History Fund	$ 1,316.93	
Fulton National Bank, Atlanta, subject to check	11,475.92	
Standard Federal and Savings Association, Atlanta	5,159.89	
Citizens & Southern National Bank, Atlanta, Savings	5,355.68	
First National Bank, Atlanta	5,314.68	
Six $1,000 U. S. Government Savings Bonds	4,869.74	
Four $1,000 U. S. Government Savings Bonds	3,195.75	$36,688.59
Total		$56,628.34

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

Financial Statement

May 1, 1941, to March 31, 1942

RECEIPTS

Dues from Subscriptions	$ 4,067.31	
Advertising	6,131.31	
Subscriptions	72.85	$10,271.47

DISBURSEMENTS

Printing	$ 3,202.20	
Salaries	2,158.75	
Engraving	404.80	
Rent (covers almost two years)	375.00	
Postage	327.00	
Commission on Advertising Orders	289.24	
Envelopes	89.67	
Copyright	40.33	
News Items	50.00	
Addressograph Supplies	6.25	
Profits	3,328.23	$10,271.47

PUBLIC RELATIONS BUREAU

Financial Statement

May 1, 1941, to March 31, 1942

RECEIPTS

May 1, 1941:		
Cash on hand	$ 3,251.71	
Collected	1,453.25	
Deficit	407.79	$ 5,112.75

DISBURSEMENTS

Projector Machines, films and other connected expenses for Public Health Education	$ 4,048.00	
Work	751.25	
Printing Medical News	231.00	
Postage	82.50	$ 5,112.75

MEDICAL ASSOCIATION OF GEORGIA

Expenditures Itemized

May 1, 1941 - March 31, 1942

No.	Name	Amount
3595	Joe Boone Daily reports of bills introduced in the Lower House of the General Assembly of Georgia during the 1941 session, also copy of court calendar for the Committee on Public Policy and Legislation	$ 50.00
3620	Mrs. L. P. Holmes Commission on Macon advertising orders for the April, 1941, issue of THE JOURNAL	60.75
3621	L. F. Livingston, Postmaster Postage	30.00
3622	Photo Process Engraving Co. Cuts for illustrations used in the April, 1941, issue of THE JOURNAL and others for the May number	142.18
3623	Southern Bell Tel. & Tel. Co. Account to April 11, 1941	7.64
3624	John H. Harland Co. 20,520 Letterheads	87.20
3625	Ansley Hotel Expenses of Committee on Public Policy and Legislation	23.44
3626	A. B. Dick Company Mimeograph stencils and ink	8.15
3627	Empire Letter Shop Multigraphing letters for Dr. Edgar H. Greene, chairman of Committee on Medical Preparedness	1.50
3628	Walter W. Brown Publishing Co. Binding 11 volumes of the 1940 issues of THE JOURNAL and 100 reprints of the report of Dr. H. F. Sharpley, chairman of the Committee for the Study of Maternal Mortality and Infant Deaths	32.50
3629	Foltz Photography Photograph from print of picture of Dr. Richard D. Arnold, (1808-1876) for illustration in the April, 1941, issue of The Journal	2.50
3630	Frank J. Christian Photograph of the print of picture of Dr. Lewis D. Ford (1801-1883) used as an illustration in the April issue of THE JOURNAL	3.00
3631	H. L. Rowe Extra secretarial work and for the Committee on Public Policy and Legislation, April 1, 1940, to April 30, 1941	97.50
3632	Mrs. G. R. Sims Secretarial work from April 1, 1940, to April 30, 1941	162.50
3633	Mrs. Felton Knight Secretarial work for the Committee on Medical Preparedness	25.00
3634	J. L. Campbell, M.D. Expenses for the Committee on Public Policy and Legislation	50.00

3635—S. A. Kirkland, M.D.
Expenses incurred for the Committee on Public Policy and Legislation..... 50.00

3636—Edgar D. Shanks, M.D.
Expenses incurred for the Committee on Public Policy and Legislation..... 50.00

3637—Edgar D. Shanks, M.D.
Travel expenses and expenses incurred for the Committee on Public Policy and Legislation and miscellaneous items from April 1, 1940, to April 30, 1941 155.00

3638—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for April, 1941 200.00

3639—H. L. Rowe
Salary for Executive Secretary for April, 1941 192.50

3640—William H. Kelley, M.D.
Expenses to and from Albany and honorarium for conducting post-graduate medical education..... 116.50

3641—Addressograph Sales Agency
Three ribbons for addressograph..... 2.70

3642—James M. Springer
Art work for the Committee on Hospitals, used in the scientific exhibit at Macon, May 13-16, 1941..... 60.00

3643—L. F. Livingston, Postmaster
Deposit for postage to mail The Journal 25.00

3644—Empire Letter Shop
Mimeographing letters for the Committee on Medical History of Georgia 2.00

3645—Darby Printing Co.
Printing 600 copies of the May, 1941 issue of the Medical News..... 21.00

3646—Bryan, Middlebrooks & Carter, Attys.
Cost for reporter taking depositions in the suit of Homer Curl vs. Dr. A. T. Coleman 10.52

3647—Photo Process Engraving Co.
Cuts for illustrations..... 68.43

3648—Miss Annie Jacks
Commission on advertising orders..... 37.12

3649—J. H. Sherman, M.D.
Expenses and honorarium for lecturing at Albany on general surgery before the seminar..... 102.50

3650—C. W. Roberts, M.D.
Expenses for Committee on Industrial Health 4.15

3651—Mrs. Donald Curtice
Work for Reference Committee..... 5.35

3652—C. H. Hunnicutt
Night watchman May 12-16, 1941, and for James Frith for two nights at Municipal Auditorium, Macon, during the annual session 22.00

3653—A. P. Cook, Jr.
Helping to operate moving picture machines at Municipal Auditorium, Macon, May 12-16, 1941, during Macon session 12.00

3654—Cash
Operating moving picture and projector machines at the Municipal Auditorium, Macon, during annual session, May 12-16, 1941 16.00

3655—Wilbur Bell
Operating moving picture machine at Hotel Dempsey, Macon, May 12-16, 1941, during annual session..... 9.00

3656—Mary Stoves
Help at registration desk during the Macon session, May 12-16, 1941 16.00

3657—Cash
Paid for work for commercial exhibit, $34.15; cloth, $5.15; room rent for H. L. Rowe, $17.50; meals for H. L. Rowe, $9.75 66.55

3658—Dan Holt
Help in arranging for the Macon session, May 12-16, 1941..... 10.00

3659—Miss Marian Tidwell
Stenographic work for Reference Committee No. 1, during the Macon session, May 12-16, 1941..... 10.00

3660—L. F. Livingston, Postmaster
Postage 30.00

3661—Cash
Post office and fee to copyright the May, 1941, issue of The Journal..... 2.06

3662—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the May, 1941, issue of The Journal 303.65

3663—Thos. L. Ross, Jr., M.D.
Expenses incurred for the Macon session, May 12-16, 1941..... 15.00

3664—Russell L. Cecil, M.D.
Expenses to and from Macon, May 13-16, 1941, guest speaker..... 93.80

3665—William H. Myers, M.D.
Payment on expenses for delegate to the annual session of the American Medical Association, Cleveland, June 2-6, 1941 150.00

3666—C. W. Roberts, M.D.
Payment on expenses for delegate to the annual session of the American Medical Association, Cleveland, June 2-6, 1941 150.00

3667—Olin H. Weaver, M.D.
Payment on expenses for delegate to the annual session of the American Medical Association, Cleveland, June 2-6, 1941 150.00

3668—Edgar D. Shanks, M.D.
Payment on expenses for special representative to the annual session of the American Medical Association, Cleveland, June 2-6, 1941..... 150.00

3669—J. D. Grant
Lahor, storing, trucking, setting up

booths for scientific exhibit, Macon, May 12-16, 1941 191.88

3670—Southern Bell Tel. & Tel. Co.
Account to May 11, 1941 19.14

3671—Logan Clark Insurance Co.
Surety bond for the Secretary-Treasurer for one year to May 25, 1942 5.00

3672—Ivan Allen-Marshall Co.
Gem clips and pencils 2.45

3673—The Floding Co.
Ribbons used as awards for the best scientific exhibits 1.50

3674—Putzel Electric Co.
Labor, material and wiring for the Municipal Auditorium, Macon, May 12-16, 1941 75.00

3675—Walter W. Brown Publishing Co.
Programs for the Association and the Woman's Auxiliary for the Macon session, May 12-16, 1941 126.10

3676—Central Sash and Door Co.
Lumber for the scientific exhibit, Macon session, May 12-16, 1941 6.19

3677—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for May, 1941 250.00

3678—H. L. Rowe
Salary for Executive Secretary for May, 1941 192.50

3679—Mark S. Dougherty, M.D.
Two sets of letters mimeographed and mailed in reference to the scientific exhibit at the Macon session, May 12-15, 1941 8.28

3680—Hotel Dempsey
Expenses of Dr. Dan C. Elkin at the Macon session, May 13-16, 1941 14.95

3681—A. M. Phillips, M.D.
Balance due on two panel luncheon discussions at the Macon session, May 13-16, 1941 64.50

3682—Cash
Post office order and fee to copyright the June, 1941, issue of The Journal 2.06

3683—L. F. Livingston, Postmaster
Postage 30.00

3684—Southern Press Clipping Bureau
News clippings for April and May, 1941 10.00

3685—Atlanta Envelope Co.
25,000 Envelopes for mailing The Journal 89.67

3686—Photo Process Engraving Co.
Balance on cuts for illustrations 4.37

3687—Shaw-Walker Co.
Steel filing cabinet 32.75

3688—Darby Printing Co.
Printing 600 copies of the June, 1941, issue of the Medical News 21.00

3689—Brown Sign Co.
Painting signs for the Macon session, May 13-16, 1941 19.75

3690—C. B. Lord, M.D.
Expenses incurred as Councilor 12.50

3691—Miss Winifred H. McLean
Reporting the Macon session, May 12-16, 1942 175.00

3692—Shanks Jewelry and Music Co.
10 Movie sound film projectors, 10 loud speakers, 10 screens, 30 canvas covers, 10 reels of films, 10 humidors; 10 reels for 1600 feet films; 10 extension cords 2800.00

3693—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the June, 1941, issue of The Journal 308.65

3694—Miss Annie Jacks
Commission on advertising 4.25

3695—Southern Bell Tel. & Tel. Co.
Account to June 11, 1941 9.95

3696—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for June, 1941 250.00

3697—H. L. Rowe
Salary for Executive Secretary for June, 1941 192.50

3698—Biltmore Hotel
Luncheon for a meeting of the Committee on Industrial Health for Dr. C. M. Peterson, Chicago, chairman, Council on Industrial Health of the American Medical Association 20.75

3699—F. C. Bate
Signs painted for the scientific exhibit, Macon session, May 12-16, 1941 51.50

3700—Darby Printing Co.
Printing 600 copies of the Medical News for July, 1941 21.00

3701—J. F. Thompson Engraving Co.
Letterheads and envelopes for the President, Allen H. Bunce 35.00

3702—L. F. Livingston, Postmaster
Deposit for Postage to mail The Journal 25.00

3703—Georgia Tuberculosis Association
Two health films 31.00

3704—Erpi Classroom Films, Inc.
Three films to be used by Councilors in health education work 135.00

3705—University of Minnesota
One film to be used by Councilors in health education work 36.00

3706—Associated Mutuals
Marine fire insurance on all projectors, moving picture machines, films, etc. 68.00

3707—Southern Bell Tel. & Tel. Co.
Account to July 11, 1941 6.76

3708—L. F. Livingston, Postmaster
Postage 30.00

3709—Garlington-Hardwick Co.
Rent for six months—May 9-November 9, 1941 150.00

3710—Walter W. Brown Publishing Co.

Printing and mailing 2300 copies of the July, 1941, issue of The Journal 309.56

3711—Southern Engraving Co.
Cuts for illustrations 50.60

3712—Cash
Post office order and fee to copyright the July, 1941, issue of The Journal 2.06

3713—John Wolf, Florist
Floral design for Dr. Wm. H. Myers, Savannah, past president 10.00

3714—Ivan Allen-Marshall Co.
Vertical folders, wrapping paper, pencils and twine 3.35

3715—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for July, 1941 250.00

3716—H. L. Rowe
Salary for Executive Secretary for July, 1941 192.50

3717—Southern Engraving Co.
Cuts for illustrations 63.56

3718—Southern Press Clipping Bureau
News clippings for June and July, 1941 10.00

3719—Darby Printing Co.
Printing 600 copies of the August, 1941, issue of the Medical News 21.00

3720—Western Union Telegraph Co.
Account for June and July, 1941 25.43

3721—L. F. Livingston, Postmaster
Postage 30.00

3722—Cash
Deposited in trust fund to copyright The Journal 24.15

3723—Reagan Visual Education Co.
Twelve sound health films 439.00

3724—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the August, 1941, issue of The Journal 308.65

3725—Associated Mutuals
Premium on fire insurance for office furniture and fixtures for one year to August 24, 1942 24.75

3726—Southern Bell Tel. & Tel. Co.
Account to August 11, 1941 8.14

3727—American Surety Co. of N. Y.
Premium on surety bond for Executive Secretary to September 6, 1942 5.00

3728—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for August, 1941 250.00

3729—H. L. Rowe
Salary for Executive Secretary for August, 1941 192.50

3730—L. F. Livingston, Postmaster
Postage 30.00

3731—Reagan Visual Education Co.
One film 75.00

3732—Dr. Kenneth McCullough, Sec'y.
Refund for overpayment of dues for new members 7.00

3733—A. B. Dick Co.
Work on addressograph 9.00

3734—J. F. Thompson Engraving Co.
Letterheads and envelopes for the Committee on Appendicitis—Dr. T. C. Davison, chairman 17.00

3735—Ansley Hotel
Tip paid at Ansley Hotel at dinner, August 14, 1941 2.00

3736—Shanks Jewelry and Music Co.
Name plates for projectors and machines in care of the Councilors—and photo electric cell 15.70

3737—Darby Printing Co.
Printing 600 copies of the Medical News, September, 1941, issue 21.00

3738—Addressograph Sales Agency
Name plates and ribbon for addressograph 3.55

3739—Bryan, Middlebrooks & Carter, Attys.
Attorney's fee for William Brunson in suit of Homer Curl vs. Dr. A. T. Coleman 125.00

3740—Grover Middlebrooks, Atty.
Expenses to, at and from Dublin incurred in the suit of Homer Curl vs. Dr. A. T. Coleman 19.60

3741—Reagan Visual Education Co.
Two health films 80.00

3742—Georgia Power Co.
Bulbs and lamps for visual health education 45.00

3743—Miss Annie Jacks
Commission on advertising 9.37

3744—L. F. Livingston, Postmaster
Postage 30.00

3745—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the September, 1941, issue of The Journal 308.65

3746—L. F. Livingston, Postmaster
Deposit for postage to mail The Journal 25.00

3747—W. Z. Turner Baggage Co.
Brief case 10.00

3748—Southern Press Clipping Bureau
News clippings for August and September, 1941 10.00

3749—Southern Bell Tel. & Tel. Co.
Account to September 11, 1941 6.00

3750—Walter W. Brown Publishing Co.
250 Twenty-four-page reprints of officers and committees and synopsis of the proceedings of the House of Delegates 32.50

3751—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for September, 1941 250.00

3752—H. L. Rowe
Salary for Executive Secretary for September, 1941 192.50

3753—J. F. Thompson Engraving Co.
Letterheads and envelopes for officers

and committees 43.75

3754—Searcy & Co.
Fire insurance on scientific exhibit equipment 10.00

3755—Western Union Telegraph Co.
Account for August and September, 1941 1.67

3756—L. F. Livingston, Postmaster
Postage 30.00

3757—J. L. Campbell, M.D., Chairman
Expenses for Cancer Commission 150.00

3758—Grover Middlebrooks, Atty.
Expenses incurred to, at and from Nashville in the trial of suit of Odis Harper vs. Dr. W. W. Turner 40.35

3759—Darby Printing Co.
Printing 600 copies of the October, 1941, issue of the Medical News 21.00

3760—Tompkins' Label Service
511,000 Labels for the Committee on Appendicitis 100.16

3761—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the October, 1941, issue of The Journal 308.65

3762—Grover Middlebrooks, Atty.
Expenses incurred in suits of Mrs. Roy W. Owens vs. Dr. S. E. Sanchez, Barwick; C. H. Kemp vs. Dr. R. C. Franklin, Swainsboro 44.65

3763—Grover Middlebrooks, Atty.
Expenses incurred in suit of Mrs. Joe G. Keen vs. Dr. Warren A. Coleman, Eastman, on fee for Will Ed Smith, Atty. 50.00

3764—Miss Annie Jacks
Commission on advertising orders 60.00

3765—L. F. Livingston, Postmaster
Deposit for postage to mail The Journal 25.00

3766—T. C. Davison, M.D.
Expenses incurred for Committee on Appendicitis 3.47

3767—Ivan Allen-Marshall Co.
Book for registering members, ink, pencils, erasers, paste, index tabs, rubber bands, wrapping paper, twine, penholder and drawing paper 11.45

3768—Photo Process Engraving Co.
Copper cuts 4.58

3769—Southern Bell Tel. & Tel. Co.
Account to October 11, 1941 6.36

3770—Bryan, Middlebrooks & Carter, Attys.
Attorney's fee for A. S. Bradley, Atty., Swainsboro, in suit of H. C. Kemp vs. Dr. R. C. Franklin 150.00

3771—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for October, 1941 250.00

3772—H. L. Rowe
Salary for Executive Secretary for October, 1941 192.50

3773—L. F. Livingston, Postmaster
Postage 30.00

3774—Cash
Expenses by H. L. Rowe to and from Augusta to get sketch of floor plans for exhibits space to be used during the Augusta session, April 28-May 1, 1942, help, cab fare to get Negroes, express on films, cleaning typewriter 12.40

3775—Mrs. H. G. Banister
Expenses incurred as an officer in the Auxiliary in promoting health work 3.50

3776—Photo Process Engraving Co.
Cuts for illustrations 24.35

3777—Miss Annie Jacks
Commission on advertising order 3.50

3778—S. H. Benedict
200 Floor prints of space to be used in the Bon Air Hotel, Augusta, April 28-May 1, 1942, as exhibit space during the Augusta session 42.20

3779—Edgar H. Greene, M.D.
Expenses incurred by the Chairman of the Committee on Medical Preparedness 50.00

3780—L. F. Livingston, Postmaster
Postage 30.00

3781—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the November, 1941, issue of The Journal, extra cost for making up tables, alterations in the dummy and page proof of The Journal 318.75

3782—Miss Annie Jacks
Commission on advertising order 7.50

3783—Southern Bell Tel. & Tel. Co.
Account to November 11, 1941 5.66

3784—Southern Press Clipping Bureau
News clippings for October and November, 1941 10.00

3785—Photo Process Engraving Co.
Cut for advertiser 3.91

3786—Darby Printing Co.
Printing two issues of the Medical News—600 copies each—for November and December, 1941 42.00

3787—L. F. Livingston, Postmaster
Postage 30.00

3788—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for November, 1941 250.00

3789—H. L. Rowe
Salary for Executive Secretary for November, 1941 192.50

3790—Dr. Steve P. Kenyon
Expenses incurred as Councilor 9.70

3791—Grover Middlebrooks, Atty.
Expenses incurred in taking depositions at Waycross in suit of Mrs. Ethel Jernigan and J. C. Jernigan vs. Dr. H. G. Huey and Dr. R. A. Schanze 24.15

3792—Western Union Telegraph Co.
Account for October and November, 1941 2.97
3793—J. F. Thompson Engraving Co.
Envelopes and letterheads for officers and committees 13.50
3794—Miss Annie Jacks
Commission on advertising order..... 60.00
3795—Allen H. Bunce, M.D.
Honorarium for President, 1941-1942 300.00
3796—L. F. Livingston, Postmaster
Postage 30.00
3797—Garlington-Hardwick Co.
Rent from November 9, 1941, to January 19, 1942..... 58.33
3798—Ivan Allen-Marshall Co.
Typewriter paper 5.70
3799—Atlanta Envelope Co.
One thousand voucher checks..... 31.00
3800—Southern Bell Tel. & Tel. Co.
Account to December 11, 1941..... 5.55
3801—Photo Process Engraving Co.
Cuts for illustrations..... 6.26
3802—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for December, 1941 250.00
3803—H. L. Rowe
Salary for Executive Secretary for December, 1941 192.50
3804—Ansley Hotel
Expenses incurred by Committee on Medical Preparedness after deducting balance on duebill for meals..... 31.35
3805—Walter W. Brown Publishing Co.
Printing and mailing 2400 copies of the December, 1941, issue of The Journal, four page insert, also 1000 copies of insert reprinted..... 352.14
3806—L. F. Livingston, Postmaster
Postage 30.00
3807—Darby Printing Co.
Printing 600 copies of the January, 1942, issue of the Medical News..... 21.00
3808—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the January, 1942, issue of The Journal 330.65
3809—Miss Annie Jacks
Commission on advertising orders..... 33.00
3810—Bryan, Middlebrooks & Carter, Attys.
Cost of reporting suit of Willie E. Slack vs. Dr. J. H. Crawford, Federal Court 22.00
3811—Southern Press Clipping Bureau
News clippings for December, 1941, and January, 1942 10.00
3811A—Southern Bell Tel. & Tel. Co.
Account to January 11, 1942..... 5.30
3812—Fulton County Medical Society
Library expenses to January 31, 1943 500.00
3812A—L. F. Livingston, Postmaster
Deposit to pay postage on Journals.... 25.00
3813—Harper Brothers Art Store
Boxing portrait of Dr. Ford to ship to the Atlanta office..... 3.50
3814—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for January, 1942 250.00
3815—H. L. Rowe
Salary for Executive Secretary for January, 1942 192.50
3816—L. F. Livingston, Postmaster
Postage 30.00
3817—Superintendent of Documents, U. S. Government Printing Office
12 Copies of minor civil division maps of the State of Georgia 1.80
3818—L. F. Livingston, Postmaster
Deposit to pay postage to mail The Journal 25.00
3819—Grover Middlebrooks, Atty.
Expenses to and from Moultrie to take depositions in the suit against Dr. W. R. McGinty 50.69
3820—Grover Middlebrooks, Atty.
One-half of annual retainer to represent the Medical Association of Georgia and its members to December 31, 1942 500.00
3821—J. Frederick Smith
Repairing and refinishing book cases and other furniture 50.00
3822—Construction Service Co.
Furnishing and installing asphalt tile in office at the Academy of Medicine 159.00
3823—Mrs. Paul Norris
Extra work 7.00
3824—Myers-Dickson Furniture Co.
Second hand mahogany bookcase..... 49.50
3825—Miss Annie Jacks
Commission on advertising order..... 7.00
3826—Garlington-Hardwick Co.
Rent from January 19 to February 28, 1942 41.67
3827—O. K. Storage and Transfer Co.
Moving from 105 Forrest Avenue, N. E., to 875 West Peachtree Street, N. E., Atlanta 26.50
3828—L. F. Livingston, Postmaster
Postage 30.00
3829—Earl Byrdsong
Helping to pack and helping to place things after moving to 875 West Peachtree St., N. E..... 9.00
3830—Miss Annie Jacks
Commission on advertising order..... 6.75
3831—Southern Engraving Co.
Cuts for illustrations..... 36.64
3832—Edgar D. Shanks, M.D.
Salary for Secretary-Treasurer for February, 1942 250.00
3833—H. L. Rowe
Salary for Executive Secretary for February, 1942 192.50

3834—A. B. Dick Co.
Mimeograph stencils and ink 5.65

3835—American Medical Association
Six copies of Legal Responsibility for Medical Practice 3.00

3836—Herff-Jones Co.
President's Key for Dr. Allen H. Bunce, President 1941-42 9.26

3837—Southern Bell Tel. & Tel. Co.
Account to February 11, 1942 5.84

3838—Addressograph-Multigraph Corporation
Difference in exchange of addressographs—hand machine swapped for electric driven machine 300.00

3839—Darby Printing Co.
Printing 600 copies of each of the February and March, 1942, issues of the Medical News 42.00

3840—Outstanding

3841—Grover Middlebrooks, Atty.
Court reporter for making transcript of testimony in suit of Luke Brown vs. Dr. W. R. McGinty, Moultrie 15.38

3842—Walter W. Brown Publishing Co.
Printing and mailing 2300 copies of the February, 1942, issue of The Journal, two pages in two color ads and special monotype work on four pages 347.85

3843—Rand & Co.
Copies of the proceedings of the organization meeting of the Medical Association of Georgia 9.66

3844—Schering Corporation
Refund of 50 per cent of the charges for space in the commercial exhibit at the Augusta session, April 28-May 1, 1942 (reservation cancelled) 50.00

3845—L. F. Livingston, Postmaster
Deposit to pay postage due 10.00

3846—L. F. Livingston, Postmaster
Postage 30.00

3847—Walter W. Brown Publishing Co.
Printing membership cards for 1942; remittance forms for 1941 and 1942; inserts and reprints of inserts 55.50

3848—L. F. Livingston, Postmaster
Postage 30.00

Three items returned and paid later:
E. G. Bowden, M.D., subscription 2.50
S. C. Lynn, M.D., advertising 8.00
O. W. Kitchens, M.D., dues 7.00
Exchange deducted by bank on non par items 7.34

Total $19.939.75

NATIONAL ACADEMY HONORS CHINESE SCIENTIST

Dr. Robert Kho-seng Lim, director of the Medical Relief Corps of the Chinese Red Cross, has been elected a foreign associate of the National Academy of Sciences by a unanimous vote, United China Relief has been informed by Dr. Walter B. Cannon, foreign secretary of the Academy.

Dr. Cannon, in his letter to Paul G. Hoffman, national chairman of United China Relief, declared that this citation is "the highest honor which the most highly esteemed scientific organization in the United States can confer upon a foreign scientist." Dr. Lim is at this moment somewhere on the Burma front, directing the work of nine mobile Red Cross units serving the United Nations troops. Since the beginning of the Sino-Japanese war, his work has been supported by the American Bureau for Medical Aid to China and the China Aid Council, both participating agencies of United China Relief.

Dr. Lim received his medical education at Edinburgfi and did post-graduate research at the University of Chicago. Later he became head of the department of physiology at Peking Union Medical College.

At the outbreak of the Chinese war with Japan, he undertook the organization of the Chinese Red Cross on a wartime basis. The Medical Relief Corps of the Chinese Red Cross, of which he is director, is credited with having reduced the death-rate from wounds in the Chinese Army by one-third. Dr. Lim also, with the cooperation of the Chinese National Health Administration, has organized an epidemic prevention program so effective that their has been no large scale outbreak of cholera or other deadly disease in China since the war began.

Dr. Cannon's citation, made when the honor was conferred upon Dr. Lim by the Academy, follows:

"This is the greatest honor which the most highly esteemed scientific organization of the United States can confer on a foreign scientist. The list of foreign physiologists who have been honored thus have included such men as Sherrington, Pavlov, Adrian and other Nobel Laureates. China is old as a nation, but young in science. Dr. Lim has been a pioneer in the development of physiological science in China. In addition to his main contributions to China's medical progress, Dr. Lim's other activities are especially noteworthy, including his maintenance of high standards in his own department; his success in attracting very able young Chinese into scientific careers, his establishment of the *Chinese Journal of Physiology* and his devotion to it. his establishment of the Chinese Physiological Society, and his outstanding ability in the application of modern medicine and surgery in China's present need.

Maintenance and necessary expansion of medical relief work in China by United China Relief's member agency, the American Bureau for Medical Aid to China, will require an outlay of $1,041,700 during the fiscal year April 1, 1942, to April 1, 1943, according to a budget estimate issued at the relief organization's national headquarters, 1790 Broadway, New York City.

THE PRESIDENT'S PAGE

During the past twelve months I traveled around the State witnessing the efficient work of President Allen Bunce and learned much from him which will aid me during the year ahead.

The only criticism I have to offer is due to poor attendance at most of the district meetings. Valuable information was presented at each meeting which many doctors missed, thus depriving their patients of some advantages, stunting the growth of professional knowledge and crippling organized medicine. The only legitimate excuse for not attending at least a majority of our medical meetings is personal illness.

Georgians will be largely cared for during the war by older doctors pressed for time. We must support organized medicine so that it will be a virile force, which our young doctors will greatly need when they return.

During the coming months I shall talk to you about our nutritional problems. Forty per cent of our people are undernourished despite the fact that there is a food supply warehouse in every county in Georgia which will furnish free foods to schools for undernourished children.

United States Public Health leaflet entitled "Eat the Right Food," and Georgia Department of Public Health leaflet, "Buy Your Vitamins in Food," are safe guides containing outlines of balanced diets so essential to make and keep us physically fit.

This we owe to our country and ourselves. "Buy Your Vitamins in Food" leaflets may be secured by writing the Georgia Department of Public Health and requesting one to two hundred or more at a time. They should be given to all Georgians.

Vitamins are essential food elements and are not some super new drugs to be dispensed primarily on prescriptions. At times they are needed in addition to a balanced diet, but this is a matter for the physician to decide.

There are hundreds of thousands of Georgians who receive insufficient incomes to pay for vitamins except through foods grown at home. Cows, chickens and gardens constitute the foundation and plans should be made for every farmer to grow these and other foods for home consumption. Many city dwellers can do this, too, in part. It is perhaps the only economic way to supply the essential food elements to one-third of our citizens.

It is my desire to see each district society devote one meeting to our nutritional needs to which the public is invited. The meeting could be held at night. A nutritional expert from one of our medical colleges should be on the program. The Department of Public Health could furnish information on soils and needed fertilization so that the essential minerals might be made available in vegetables even where erosion has done its damages by washing away the top soil. When we call such procedure a *Victory* plan we are thinking not only of winning the war but of developing our citizens so that they may enjoy the fullness of life.

Tuberculosis has challenged us and will defeat us unless we lead an intelligent fight against it. Authorities are all agreed that wards must be built in our general hospitals where curable tuberculous patients can be treated. Such plan is much more economic than separate buildings. With additional equipment and personnel most efficient work is done at Alto, but only about 10 per cent of treatable patients can be cared for. Thus you see it is nine-tenths a local problem for all communities. The burden of leadership rests upon your shoulders. Tuberculosis is the leading killer in the 18-45 age group. We can give the unfortunates a chance and stop the spread to helpless children. Let's do it.

In brief these are my No. 1 and No. 2 objectives. I stand ready to assist in any other progressive movements that will benefit our people. Therefore, I invite suggestions from both our members and the Woman's Auxiliary.

James A. Redfearn, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia

478 Peachtree Street, N. E., Atlanta, Ga.

MAY, 1942

ULTRAVIOLET RADIATION

For the first time quantitative data on the amount of ultraviolet solar and sky radiation incident in high latitudes has been made available as a result of cooperative efforts of Dr. W. W. Coblentz of the National Bureau of Standards and the Louise A. Boyd Arctic Expedition of last summer, according to the Department of Commerce.

Simple, automatic measuring and recording apparatus was installed on the vessel used for the expedition. The most northerly point reached was in latitude 78° N. Here the ultraviolet intensity in August was practically the same as in Washington, D. C., during November and December, the noon elevation of the sun above the horizon being almost identical.

Taking into consideration the long days during midsummer in the far north, it is evident that animal and plant life is exposed to an appreciable amount of radiation that has a biological effect in metabolism, in the production of vitamin D and in the prevention of rickets.

This information is of great interest to the medical profession in their studies of rickets in children and in studies of the propagation of minute forms of marine plants and animals.

In Iceland in early spring, long before the sun can shine into the deep fjords, the ultraviolet radiation from the sky causes the faces of the inhabitants to take on a ruddy color that develops into a dark-brown tan in midsummer when exposed not only to the light reflected from the sky but to direct sunlight as well. Actually, in Iceland fewer children are said to have rickets than in the Faroe Islands, which are somewhat farther south but where the sky is most often cloudy.

CRAWFORD W. LONG MEMORIAL BUILDING

One hundred years have passed since Crawford W. Long proved to himself and those with whom he was associated the value of the anesthetic properties of ether. Hundreds of thousands of people in all parts of the world have benefited by his contribution to the science and art of medicine, and no doubt many of those living now will be pleased to learn that the Medical Association of Georgia will at some time in the future erect for its headquarters a building to perpetuate for all time the memory of its most distinguished deceased member.

The Association, at its Ninety-Third Annual Session, held in Augusta April 28-May 1, voted to set aside the sum of $5,000 as a nucleus for a building fund for the Crawford W. Long Memorial Building. This fund will be increased from year-to-year as the Association directs. Plans for the building will be under the direction of the Council of the Association, as indicated by the following resolution:

WHEREAS, The activities of the Medical Association of Georgia have grown each year; and

WHEREAS, There should be established a permanent headquarters office for the routine business of the Association, for the preservation of the archives of the Association, including medical history; and for a medical package library service for the benefit of both the medical profession and the public; and

WHEREAS, The finances of this Association are now favorable to the development of such a plan; and

WHEREAS, This year—1942—marks the hundreth anniversary of Dr. Crawford W. Long's discovery of the anesthetic properties of ether; and

WHEREAS, It would be appropriate for this Association to honor the memory of its most distinguished deceased member—Crawford Williamson Long—by naming the proposed building the Crawford W. Long Memorial Building; therefore

BE IT RESOLVED, By the Council of this Association, and the same is recommended and transmitted to the House of Delegates and the Association in general session, at Augusta, this May 1, 1942, that the Medical Association of Georgia develop, through its Council, plans for a permanent headquarters building for the Association, and that the sum of Five Thousand ($5,000) Dollars be set aside by the Association's Secretary-Treasurer to be known as the Building Fund, the fund to be added to from year-to-year as the Association directs until a sufficient amount is available to facilitate a suitable building program.

WILLIAM ARTHUR SELMAN, M.D.

The bearer of this, who is going to America, presses me to give him a letter of recommendation, though I know nothing of him, not even his name. This may seem extraordinary, but I assure you it is not uncommon here. Sometimes, indeed, one unknown person brings you another equally unknown to recommend him; and sometimes they recommend one another! As to this gentleman, I must refer you to himself for his character and merits, with which he is certainly better acquainted than I can possibly be. I recommend him, however, to those civilities, which every stranger, of whom one knows no harm, has a right to; and I request you will do him all the good offices, and show him all the favor, that on further acquaintance you shall find him to deserve.

—Benjamin Franklin,
United States Minister to France, 1776-1785.



William Arthur Selman, M.D.
Atlanta
President-Elect, 1942-43

Unlike Franklin's newly-made friends, Dr. William Arthur Selman, of Atlanta, President-Elect of the Medical Association of Georgia at its Ninety-Third Annual Session, needs no recommendation to the citizens of Georgia. And he is a gentleman of the first order.

The son of the late James Wilson and Catherine Riley Selman, William Arthur Selman was born on a farm in Douglas County, Georgia, Feb. 20, 1875. He attended school at the Powder Springs High School, Powder Springs, Ga., from 1882 to 1895. His scholastic attainments in high school won for him special recognition by the authorities of the University of Georgia, Athens, where he was permitted to matriculate in the junior class in the autumn of 1895 and where, in 1897, he received his Bachelor of Science degree. During the next two years he taught school: one term at Sardis, Ga., and one term at Powder Springs, Ga.

Dr. Selman's medical career began in 1899, when he registered as a freshman student in Emory University School of Medicine, Atlanta. Again he prosecuted his studies with diligence and soon he was appointed one of the prosectors in human anatomy, a position he held until he was granted his Doctor of Medicine degree in 1902. From 1902 to 1904 he served one-year internships in each of the following named Atlanta hospitals: Grady Memorial Hospital and Elkin-Goldsmith Sanatorium, at the same time continuing his teaching in the Department of Anatomy at the Medical School and hoping for some patients to visit his newly-opened office. His excellent work early gained for him many patients and promotion on the medical faculty: to the Department of Surgery. Later he was designated Associate Professor of Surgery, which position he holds today.

Dr. Selman has long been an enthusiastic supporter of organized medicine. He joined the Fulton County Medical Society, Atlanta, in 1904, and has occupied the following named offices in that society: Secretary-Treasurer, 1913-15; Vice-President, 1915; and President, 1916. In addition to serving on various committees of his medical society, he has held numerous positions of trust in the Medical Association of Georgia: he was Vice-Councilor of the Fifth District for several years, and in 1931 was appointed Councilor. During recent years he has been chairman of the Council. Other duties imposed on him have been: chairman

of the Committee on Awards and chairman of the Committee on Medical Preparedness, the last named committee being very active in the present national emergency.

Other medical organizations in which Dr. Selman holds membership and to which he has contributed are: the Southern Medical Association, the American Medical Association, the American College of Surgeons, the Southeastern Surgical Congress and the Chattahoochee Valley Medical Association. His numerous scientific articles have been devoted to the subjects of anesthesia and of surgery. During recent years he has been interested in the advancement of public health and has participated actively in health education programs for the public.

Dr. Selman is a member of the staff of each of the following named Atlanta hospitals: Crawford W. Long Memorial Hospital, Georgia Baptist Hospital, Grady Memorial Hospital, and Piedmont Hospital. In all of these institutions he is sought out as a consulting surgeon, and as a friend to whom any young surgeon may turn in time of need. Indeed, it has been said that Arthur Selman has perhaps helped more young surgeons to develop into mature surgeons than has any other surgeon in Atlanta, and he is a friend to all physicians regardless of their scientific pursuits. Dr. Selman travels frequently to the various medical centers for post-graduate study.

Despite Dr. Selman's busy professional life he finds time for other activities. He is a member of the Baptist church, a member of the Phi Chi medical fraternity and is a Mason. His hobbies are: golfing, fishing, hunting and public speaking. The last named endeavor has been augmented somewhat during the past year by the Dale Carnegie system of public speaking.

In 1905 Dr. Selman was married to Miss Elizabeth Crouch, of Gay, Ga. They are the parents of two children: Mrs. H. E. Craig, of Atlanta, and Mrs. Edwin J. Cathell, of Lexington, N. C., and the grandparents of five children.

As indicated in the beginning of this brief sketch about Dr. Selman, he needs no recommendation to anyone, and he will honor the office to which he was elected. But in these troublesome times—war time—he will need the help of every member of the Medical Association of Georgia. Let's pledge him that aid now!

OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association:

The ninety-third annual session of the American Medical Association will be held in Atlantic City, New Jersey, from Monday, June the eighth, to Friday, June the twelfth, Nineteen hundred and forty-two.

The House of Delegates will convene on Monday, June the eighth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June the ninth at 8 P. M.

The various sections of the Scientific Assembly will meet Wednesday, June the tenth, at 9 A. M. and at 2 P. M. and subsequently according to their respective programs.

FRANK H. LAHEY, President
H. H. SHOULDERS
Speaker, House of Delegates.

Attest:
OLIN WEST, Secretary
Chicago, Illinois, March the sixteenth.

HOUSE OF DELEGATES

The House of Delegates will convene at 10:00 A. M. on Monday, June 8, 1942, in the American Room of the Hotel Traymore, Boardwalk at Illinois Avenue.

REPRESENTATION

The apportionment of delegates made at the New York Session of 1940 entitles your State Association to three delegates for 1941-42-43.

"A member of the House of Delegates must have been a member of the American Medical Association and a Fellow of the Scientific Assembly for at least two years next preceding the session of the House of Delegates at which he is to serve.

"Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one half, as near as may be, shall be elected each year. Delegates and alternates elected by the sections, or delegates appointed from the United States Army, United States Navy and United States Public Health Service shall hold office for two years."—*Chap. I. Secs. 1 and 2, By-Laws.*

RULES FOR THE GUIDANCE OF THE COMMITTEE ON CREDENTIALS

Adopted by the House of Delegates at Atlantic City, N. J., June 6, 1912.

1. Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Medical Association by the secretary of the constituent association, not later than seven days prior to the first day of the first meeting of the House of Delegates, and shall be a list of delegates and alternates for that association. The constituent association shall designate an alternate for each delegate, who may take the pledge of the delegate when authorized to do so by said delegate in writing. In the absence of such authority, any alternate who has been duly chosen by the constituent association may be seated in place of any delegate who is unable to attend, provided he presents proper official authority from said association. A certificate signed by the president or secretary of the constituent association shall be deemed legal authority (*as amended June 7, 1921*).

2. Each delegate shall be furnished with a credential by the secretary of the association by which he is elected on a prescribed form furnished by the Secretary of the American Medical Association, which shall give the date and term for which he was elected and who was elected to act as alternate for him in case of his inability.

3. A delegate, on presenting himself to the Committee on Credentials, may be seated even though he may not present part 2 of his credential, provided he is properly identified as the delegate who was elected by his association and whose name appears on the Secretary's record.

4. No alternate may be seated unless his credentials meet the same requirements as designated for the delegate and he can show written evidence that he is empowered by his delegate to act for him, except as provided for in Section 1 as amended (*as amended June 7, 1921*).

5. When a constituent state association reports that one of its elected delegates and his elected alternate are both unable to attend a specified annual session of the American Medical Association, the constituted authority of said constituent state association may fill the vacancies caused by the absence of both an elected delegate and his elected alternate, and such a substitute delegate or his substitute alternate who presents proper credentials signed by the president and secretary of said constituent state association shall be eligible to regular membership in the House of Delegates of the American Medical Association in such a specified session (*as adopted, May 12, 1932*).

SCIENTIFIC ASSEMBLY

The Opening General Meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held Tuesday evening, June 9, 1942, at 8:00. The Sections will meet on Wednesday, Thursday and Friday, June 10, 11 and 12.

CONVENING AT 9:00 A. M., THE SECTIONS ON

Surgery, General and Abdominal.
Ophthalmology.
Pediatrics.
Experimental Medicine and Therapeutics.
Nervous and Mental Diseases.
Dermatology and Syphilology.
Gastro-Enterology and Proctology.
Radiology.
Miscellaneous Topics:
Sessions on General Practice.
Session on Medicolegal Medicine.

CONVENING AT 2:00 P. M., THE SECTION ON

Practice of Medicine.
Obstetrics and Gynecology.
Laryngology, Otology and Rhinology.
Pathology and Physiology.
Orthopedic Surgery.
Urology.
Preventive and Industrial Medicine and Public Health.
Anesthesiology.

REGISTRATION DEPARTMENT

The Registration Department will be open from 8:30 A. M. until 5:30 P. M. on Monday, Tuesday, Wednesday and Thursday, June 8, 9, 10 and 11, and from 8:30 A. M. to 12:00 noon on Friday, June 12, 1942.

THERAPY OF MORPHINE POISONING

In the March issue of this JOURNAL,[1] the suggestions for treating acute morphine poisoning disregard the similarity of action between morphine and strychnine salts on the reflex excitability of the spinal cord. While morphine decreases attention and the response to persistent stimuli, such as those causing respiration, pain, cough, defecation and urination, it, as well as strychnine, increases the excitability of spinal reflex mechanisms. Administering strychnine to patients poisoned with morphine should be condemned since it has no demonstrable effect upon the respiratory center[2, 3] and increases the chances that convulsions may occur.[2, 3]

A simple fact often overlooked is that, if the heart is functioning and respiratory exchange is adequate, the patient will not readily die. Reflex respiratory stimulation such as that caused by the inhalation of ammonia, the injection of camphor or the dilatation of the sphincter ani is usually valueless in more severe degrees of morphine poisoning.[3] Coramine, a so-called respiratory stimulant, has been shown to be

Department of Physiology, University of Georgia School of Medicine, Augusta.

valueless.[4,5] Stimulation of the respiratory center by such drugs as caffeine, metrazol and ephedrine is occasionally efficacious in morphine depressed patients. However, animal experiments show that caffeine, ephedrine[6] and metrazol[7] are ineffective stimulants in the presence of morphine depression. Artificial respiration is effective and should be employed when indicated. If available an adequate stream of oxygen administered by catheter directly into the trachea may supplant the artificial respiration.

Benzedrine sulfate is a powerful respiratory, cortical and metabolic stimulant in animals [6,8] and in man[8] when depressed by morphine. Overdosage of benzedrine in morphinized animals may result in increased muscular tone, increased reflex excitability, pronounced stimulation of the sympathetic nervous system and occasionally death.[7] Because of this, benzedrine, if used in morphine poisoned man, should be cautiously administered while a careful check is kept on the activity of the individual.

Treatment should aim: (1) to assure an adequate respiratory exchange; (2) to prevent shock from protracted capillary anoxia; (3) to maintain body temperature; (4) to forestall the development of hypostatic pneumonia by frequently changing the position of the patient, and (5) to prevent aspiration of stomach contents if gastric lavage is being employed to remove unabsorbed morphine. Prolonged coma requires that attention be given to the intake of food, fluids and electrolytes.

R. A. WOODBURY, M.D.
B. E. ABREU, Ph.D.

REFERENCES

1. Kitchens, Neal: Treating Acute Morphine Poisoning, J. M. A. Georgia 31:108, 1942.
2. Sollmann, T: A Manual of Pharmacology, Ed. 6., Philadelphia, W. B. Saunders Company, 1942.
3. Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics, New York, The MacMillin Company, 1941.
4. Hicks, C. S.: Metrazol and Coramine on Respiration, Australian J. Exper. Biol. & M. Sc. 13:261, 1935.
5. Steininger, H., and Gaubatz, E.: Vergleich der Wirkung von Cardiazol und Coramine auf das Atemzentrum des Menschen. I. Nach subcutaner Injektion. Klin. Wchnschr. 14:159, 1935.
6. Handley, C. A., and Abreu, B. E.: Antagonism of Benzedrine to the Central Depressant Effects of Morphine, Anesth. & Analg. 20:212, 1941.
7. Unpublished observations.
8. Handley, C. A., and Abreu, B. E.: Effects of Benzedrine on Oxygen Consumption after Morphine in Men and Rats, Federation Bull. 1:153, 1942.

AWARDS

Complying with instructions of the Macon Session, 1941, of the Association, the Committee on Scientific Work awarded six certificates of merit to the six outstanding scientific exhibits at the Augusta Session, 1942: three to individuals and three to institutions; and the awards for each class were first, second and third as follows:

INDIVIDUAL:

First Award. Dr. L. P. Holmes, Augusta; Exhibit: *Unusual Chest Films.*

Second Award. Drs. Earl Floyd and Jas. L. Pittman, Atlanta; Exhibit: *Tumors of the Genito-urinary Tract.*

Third Award. Dr. Lawson Thornton, Atlanta; Exhibit: *Fracture of Clavicle, and Treatment.*

INSTITUTION:

First Award. University of Georgia School of Medicine, Augusta; Exhibits: *Various.*

Second Award. Ponce de Leon Eye, Ear, Nose and Throat Infirmary, Atlanta; Exhibit: *Ocular Diseases and Laryngeal Tumors.*

Third Award. State Tuberculosis Sanatorium, Alto; Exhibit: *Non-Tuberculous Pulmonary Diseases.*

Dr. T. F. Abercrombie, of Atlanta, director of the Georgia Department of Public Health, won the Hardman Loving Cup award for his meritorious work to advance public health in the State.

STATE BOARD OF MEDICAL EXAMINERS

PERSONNEL—MAY 1, 1942

Dr. Steve P. Kenyon, Dawson, President.
Dr. L. G. Neal, Cleveland, Vice President.
Dr. Cleveland Thompson, Millen.
Dr. H. G. Huey, Homerville.
Dr. M. B. Copeloff, Grant Bldg., Atlanta.
Dr. Hulett H. Askew, Candler Bldg., Atlanta.
Dr. R. F. Wheat, Bainbridge.
Dr. G. A. Ward, Elberton.
Dr. Harold P. McDonald, Healey Bldg., Atlanta.
Dr. J. W. Palmer, Ailey.

STEPHENS COUNTY MEDICAL SOCIETY

The Stephens County Medical Society announces the following officers for 1942:

President.....S. E. Ayers, Toccoa
Vice President.....F. B. Welton, Toccoa
Secretary-Treasurer.....C. L. Ayers, Toccoa
Delegate.....W. B. Schaefer, Toccoa
Alternate Delegate.....W. B. Heller, Toccoa

The National Gastroenterological Association will hold its seventh annual convention at Hotel Astor, New York City, June 3-4. The convention adjourns just a few days before the ninety-third annual session of the American Medical Association convenes on June 8 through June 12 in Atlantic City.

WOMAN'S AUXILIARY DEPARTMENT

Ninth District

The Woman's Auxiliary to the Ninth District Medical Society met recently in Toccoa for the semi-annual meeting. Mrs. W. L. Randolph, of Winder, manager, presided. Mrs. Lee Howard, of Savannah, president of the Woman's Auxiliary to the Medical Association of Georgia, told of plans for the annual state convention in Augusta and urged all members to attend. Mrs. Howard stressed the part the doctor's wife can play in national defense. Dr. Allen Bunce, of Atlanta, president of the Medical Association of Georgia, spoke on "Medical Problems and the Doctor's Wife." Mrs. Bunce was welcomed as a visitor to the district. Good reports were made on the showing of health films over the district and county presidents were urged to arrange their programs early so that films could be reserved. Auxiliary members joined the members of the Ninth District Medical Society for luncheon at the Albermarle Hotel.

Randolph County

Mrs. T. F. Harper, of Coleman, was elected president of the Woman's Auxiliary to the Randolph County Medical Association at a meeting recently held at the home of W. W. Crook in Cuthbert. Other officers are Mrs. L. R. Massengale, of Lumpkin, vice-president, and Mrs. Loren Gary, of Georgetown, secretary. One new subscription to Hygeia, the national health magazine published by the American Medical Association, was announced. Members were urged to have material ready for the scrapbook by time of the state meeting and it was voted to instruct members to vote against any increase in dues at the convention. Mrs. L. R. Massengale gave an excellent paper on observing Doctor's Day and read a poem, "Our Doctors," with apologies to Edgar A. Guest. A social hour followed during which Mrs. Crook and Mrs. Loren Gary, co-hostesses, served refreshments.

Barrow County

Mrs. C. B. Almand, of Winder, was re-elected president of the Woman's Auxiliary to the Barrow County Medical Society at a recent meeting held at the home of Mrs. W. L. Matthews in Winder. Other officers are Mrs. S. T. Ross, first vice-president; Mrs. Ernest R. Harris, recording secretary; Mrs. W. L. Matthews, corresponding secretary; Mrs. W. T. Randolph, treasurer; and Mrs. E. M. McDonald, historian. Mrs. S. T. Ross reported on the semi-annual district meeting, recently held in Toccoa and delegates were elected at the state convention. Mrs. R. P. Adams, Mrs. E. M. McDonald and Mrs. W. T. Randolph were appointed to arrange a May Day program. Mrs. McDonald gave a talk on "Balanced Diet for Victory" and Mrs. W. L. Matthews talked on "Clara Barton, a Soldier, too." Later a social hour was enjoyed.

The Barrow Auxiliary observed Doctor's Day at a beautifully appointed dinner given by Mrs. C. B. Almand and Mrs. R. P. Adams at the former's home, members of the Barrow County Medical Society being honored at this time. Mrs. W. L. Matthews read an appropriate poem, which she had written in honor of the doctors, and Dr. S. T. Ross responded. Present were Dr. and Mrs. S. T. Ross, Dr. and Mrs. E. M. McDonald, Dr. and Mrs. W. L. Matthews, Dr. and Mrs. W. T. Randolph, Dr. and Mrs. E. R. Harris, Mrs. Adams and Mrs. Almand.

Fulton County

The Woman's Auxiliary to the Fulton County Medical Society entertained the new officers of the society at a play and reception at the Atlanta Woman's Club on Doctor's Day. The occasion also was in celebration of the one hundredth anniversary of the discovery of ether anesthesia by Dr. Crawford W. Long. Members of the Atlanta Theatre Guild presented a play, "The Life of Crawford W. Long." Officers of the society and auxiliary sat in box seats and Mrs. Murdock Equen, president of the Auxiliary, introduced officers of the two organizations and also Dr. Frank Boland, who has done much to perpetuate the claim of Dr. Long as discoverer of ether. Later a reception was held. Mrs. D. Henry Poer was chairman of the committee of observance of Doctor's Day and Mrs. Hal M. Davison was chairman of the reception.

Fifth District

The Woman's Auxiliary to the Fifth District Medical Society met recently at the Academy of Medicine on Prescott Street, the meeting following a buffet supper at which the Auxiliary entertained members of the society. Mrs. Jeff Richardson, wife of the president of the society, and Mrs. J. R. Childs, wife of the chairman of the board of trustees of the Fulton County Medical Society, presided at the coffee table. Mrs. Marvin Mitchell and Mrs. Charles Stone had charge of serving the dinner and Mrs. W. W. Anderson of the decorations.

Mrs. J. Harry Rogers, of Atlanta, president of the district group, presided over the meeting and Mrs. Harvey Griggs, of Conyers, secretary, gave her report. Dr. Richardson greeted guests on behalf of the society. Mrs. Lee Howard, of Savannah, president of the Woman's Auxiliary to the Medical Association of Georgia, talked most interestingly on the part members of the Auxiliary can take in national defense. Mrs.

(Continued on page 218)

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

THE ARMY NURSE CORPS

JULIA O. FLIKKE, Colonel, A.U.S.
Superintendent, Army Nurse Corps
Washington, D. C.

The story of the activities of the Army Nurse Corps from the time of its birth, forty-one years ago, until the present has frequently been told, and little can be added to its past history which is not already known.

From its modest beginning at the close of the Spanish American War when, under the wisdom and guidance of Dr. Anita Newcomb McGee, contract surgeon and assistant to the Surgeon General of the Army, the bill making the Army Nurse Corps a definite component of the military service became a law until the present time, there have been great variations as to the size and strength of the corps. But it has always forged ahead, and whether the number of nurses comprising it was great or small, the influence of those women has been greatly appreciated.

It takes courage to follow new ventures, but even in those early days there were a few hundred women who willingly left their homes and often suffered privations and suffering in order that the men in the military service might receive proper nursing care. There are interesting accounts of adventure and ingenuity when serving in the Philippines as far back as 1901, on the Mexican Border in 1914, or some of the other out-posts when typhoons, sandstorms, tornadoes, floods, droughts, and mosquitoes vied with the other in making life as complicated as possible, but it only strengthened their determination to contribute their utmost for the safety and welfare of our country and its gallant defenders.

It formed an excellent foundation for the enormous responsibility which was ours when on April 6, 1917, the United States declared war on Germany. Then, as now, great camps sprang up all over the country for the training of officers and men for overseas duty. As soon as the need for nurses was made known, the response was immediate and more than adequate. Within eighteen months, 21,480 nurses had been inducted into the service, over 10,000 of whom served on foreign soil. Although air warfare had not been perfected at that time, there were submarines and mines which made water travel hazardous, and although traveling in large convoys and zigzagging, which was considered a measure of safety, there was still quite a degree of danger in crossing the ocean and nurses never ventured out of their staterooms without their life belts or jackets, and all port holes were completely blacked out. Anyone who served in those trying times will never forget the wild rejoicing and excitement when, on Nov. 11, 1918, news of the signing of the Armistice was received. Victory was won, and future peace was assured. That was the thought that made every heart beat high with joy. That was twenty-four years ago, and today we realize only too well how dreadfully mistaken we were about the outcome of that war.

Today, with all the tragic events of that war still fresh in our memory, but with a lesson learned through sad experience, the Army Nurse Corps is again recruiting nurses, and to date many thousands of well qualified, splendid young women are carrying the banner of freedom not only across the Atlantic to England, but to Ireland, Iceland, Newfoundland, Puerto Rico, Trinidad, and in the Pacific to Hawaii, Australia, the Philippines and to Alaska. With utter disregard for their own comfort and personal safety, these young women bravely request to be sent where their services are most needed, and from some of their letters we know they are grateful to be able to render such excellent service. I should like to quote a few excerpts from their letters.

From Hickam Field, Honolulu, T. H., one nurse writes:

"I feel that you would like to know something about the part your Army Nurse Corps played on December 7th during the 'blitz,' so I will try to give you an account, as I had a 'ring-side seat!'

"As you may recall, there were just six of us, who, on November 15th, were transferred to Station Hospital, Hickam Field. We felt that we were the happiest group of nurses anywhere—a new 30 bed hospital, lovely quarters—just two blocks from the Officers' Club, nice working hours, more social activity than we could possibly crowd in, the hospitality of our medicos, and above all—the grandest chief nurse, who enjoys every-

thing as much as we do. Living on the field, naturally, we knew quite a few of the pilots, so occasionally we made trips to the other islands in a flying fortress. Under such pleasant conditions, the Japs found us *that* Sunday morning.

"As there were so few patients on the wards, only two nurses reported for duty at 7:00 A. M., the others due on at 8:00 A. M. Well, at 7:55 A. M., as I was making out the routine reports, I heard a roaring of planes, very close, and remarked, 'Sounds like a plane falling'—then a great explosion—I said, 'It crashed.' The patients and I ran out on the third floor porch overlooking Pearl Harbor and saw numerous planes diving—an explosion with each dive, then a great mass of black smoke; startled, I said, 'Ye gods; It's the Japs!' (But I still could not believe it). Then one of the patients remarked, 'Oh! It's maneuvers.' About that time the Japs were over Hickam Field. *Then we knew.* You cannot imagine the noise, between the aerial torpedoes, bombs, machinegunning, our anti-aircraft and everything else; well, it was terrific! In the middle of this, the other A. N. C.'s and medicos reported for duty. Shortly, the first casualties began to come in; then the work really began. I just cannot describe the condition some of the cases were in. Everyone was still in somewhat of a 'daze'—it was unbelievable! There were phrases that registered in my mind—then I wondered what 'shrapnel' and what 'straffing' was. Soon, officers' wives and NCO's wives came in to help—we sent them to a wing and had them make dressings by the hundreds. Then we heard the roaring of planes again—the second attack. Someone yelled, 'DOWN,' we fell flat on the floor, the planes were louder, louder; the bombs—nearer, nearer (and we had neither helmet nor gas mask, and I kept thinking about all this cement building crushing in on us), so near that one made a 30 foot crater about 20 feet from the wing; then they passed over and the next fell across the street near headquarters—we thought it was hit until we got up and looked out. Then the smoke and fumes from the bombs came in, someone yelled, 'GAS.' We all thought the same thing; "The bombs didn't get me, but the gas will.' I admit it was a rather helpless feeling, but soon after that we had out masks and helmets. Then more casualties which were worse than the first. Red Cross nurses from Honolulu had come out to help—and there were quite a few officers' wives who were R.N.'s that were with us for several days. As you can probably realize, there are parts of that day that I can hardly account for. Sometime that afternoon we were taken to quarters to get clean uniforms, etc., then the wards were opened and we worked there.

"At sunset, directly in front of the hospital, 'Old Glory' was still flying even though she had a huge rip completely across, due to machinegunning and there were several bomb craters a few feet from the mast. Then began our first 'blackout' nights. Blankets were tacked up to the windows and we each had a flashlight covered with blue cellophane. It was rather eerie sitting there waiting, listening—watching. We slept at the hospital for a few weeks, first on the ward, then in the x-ray dark room. Later we moved to our original quarters. It is simply lovely—beautiful grounds, rock garden, summer house, etc., *and* completely blacked-out.

"The climate, flowers, scenery, nights, etc., are still just wonderful but instead of wearing hibiscus and leis, we are wearing little tin hats and gas masks.

"There are days like December 7th when a nurse can fully appreciate her profession as never before, and deep inside there is a feeling of satisfaction and thankfulness that she was able to do her bit to help 'Keep 'em Flying.'

From Martin Urbronski, from an electrical transcription of an interview with two Army nurses in Melbourne, Australia; one of the nurses said:

"When I was called into foreign service for the Army Nurse Corps, I had no idea where we were being sent, for we traveled under sealed orders. I had visited my family back in South Dakota, and they had sent me off with the conviction that I was going to do the job for which I was trained.

"Our American boys are fighting and being wounded for us. Who else can take care of them but American nurses and doctors? And yet, when I started out I was full of doubt and conflicting emotions. Where are we going? How long would it take? What spot of danger would we run into? But most of all, I was wondering how my family and friends could stand this suspense and the emotional strain of not knowing about my safety. And for all of you at home I know it is the same. Everyone in this war has had a different experience, but I personally want to assure all of you that are left at home that every precaution is taken for our safety.

"Our patients are American boys who come from all parts of the Union and they are a grand bunch, and we are going to see that they get the best of medical service while they are sick or wounded here, just as they would at home."

The second one said:

"I come from Big Run, Pennsylvania. What I really want to tell you about is how sincerely happy I am to have the chance to look after our American boys who are fighting for all of us. I just have to tell you one story so that you know what it means to have one of their own people looking after them.

"Before our own hospital was set up, the American nurses went to an Australian hospital and visited some of our boys who were sick there. Most of them were brought from the transport ships directly to the hospital for emergency operations and were seeing their companies go into the field without them. When they saw us their faces brightened up, and they just smiled all over. We are supposed to be hardboiled, but our hearts went out to them. One young boy from Tennessee was too bashful to call out to us when we came there, and we left without seeing him, but he got another soldier to tell us he was there. This kid from Tennessee looked about 18 and a long way from home. We think it helped him lots to have his own people near him.

"We are all anxious to get under line of duty again. We thought we would be afraid when we left home,

(Continued on page 218)

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

DIFFERENTIAL DIAGNOSIS OF TYPHUS AND ROCKY MOUNTAIN SPOTTED FEVER

Physicians in Georgia are fairly well acquainted with the symptomatology of endemic typhus fever and they are becoming more and more adept in correct clinical diagnosis.

The recent recognition of a few cases of Rocky Mountain spotted fever in Georgia has given rise to frequent inquiries as to its differential diagnosis in terms of endemic typhus fever. It is hoped that the following tabulated outline may be of assistance.

	ENDEMIC TYPHUS FEVER	ROCKY MOUNTAIN SPOTTED FEVER
ONSET	Usually sudden, chills or chilly sensation, rapid rise of fever, prostration, headache, sweating and body pains.	Sudden, with chills, aching—rapid rise in fever, prostration. Onset very similar to that of typhus, but usually more severe.
FEVER	Rises rapidly after onset by steps reaching peaks of 104 or higher by end of first week. Subsides by rapid lysis by 14th day. May drop to normal at times.	Rises rapidly after onset, reaching peak of 106 or higher in second week. Ranges from 102° to 106°, or higher in very toxic and fatal cases. Subsides by lysis during third or fourth week.
RASH	Small reddish macules varying in size, many visible only by close bedside inspection, slightly elevated, more pronounced during febrile peaks.	Macular, rose-red in color. Macules darker than those of typhus and can be plainly seen 10 to 15 feet away. Macules increase in size as disease progresses, becoming darker, even purpuric and confluent at times, or necrotic in severe cases.
	Rash *first appears over lower chest, abdomen and back*, spreading later to extremities, even to soles and palms. Rarely includes the face.	Rash *first appears on the extremities* (wrists and ankles) and extends rapidly to the body (back, buttocks and chest.) Often includes face and scalp.
	Rash begins about fifth day, subsides before the 10th day—*entirely gone before convalescence.*	Rash begins between the 2nd and 4th day and *persists throughout the febrile period and well into convalescence*, becoming brownish in color with age.
LABORATORY AIDS*	Blood picture normal at first, changing to *leukopenia* as disease advances.	Blood picture—Normal at first, but often changing to *leukocytosis* as disease advances.
	Weil-Felix reaction to Proteus X-19 positive during second week. Usually negative first week. Diagnostic reaction should be not less than 3+ at dilution 1:320 of patient's serum.	Weil-Felix reaction to Proteus X-19 may become positive during 2nd or 3rd week. Often remains negative.
HISTORY	Uusually history of rats in home or place of occupation of patient. Sometimes definite history of flea bite.	Either definite history of tick bite or of exposure to ordinary dog ticks.

*The complement fixation test for endemic typhus gives promise of becoming a valuable differential laboratory aid. Reagents for this test are not yet on the market, but the test itself is available at the National Institute of Health, Washington, D. C., by arrangement through the Georgia Department of Public Health.

	ENDEMIC TYPHUS FEVER	ROCKY MOUNTAIN SPOTTED FEVER
SUMMARY	Sudden onset, with rapidly rising fever ranging to 104° F. by end of 1st week.	Sudden onset with rapidly rising fever ranging to 105° F., or higher during 2nd week.
	Rash first appears about 5th day on *chest* and *abdomen.* Later spreads to extremities, *gone by 10th day.*	Rash first appears 2nd or 3rd day on *extremities,* later spreading to body and head, *increasing in intensity and remaining visible after convalescence.*
	Leukopenia.	*Leukocytosis*
	History of exposure to rats and rat fleas.	History of tick bite or exposure to ordinary dog ticks.

Since the agglutination reaction (Weil-Felix test) with Proteus X-19 is usually positive for both diseases, no aid in differentiation can be expected from this test.

However, a positive test is strongly suggestive of either disease and warrants careful study of the clinical findings.

Physicians are invited to request consultation with the Georgia Department of Public Health as soon as either disease is suspected clinically.

T. F. SELLERS, M.D.

WHENCE AND WHETHER IN PUBLIC HEALTH

The story of preventive medicine and sanitation or "public health," as this branch of medicine has come to be known in the fairly recent past, is a most interesting one. Its origin is lost in antiquity. These earliest practices were, of course, crude in many respects as we look back at them today. However, the ancient laws of sanitation, when compared with those of today, show up quite favorably when the same comparison is made with regard to curative medicine of that day and now.

But it is the public health of today and tomorrow in which we are now interested. It has been said that "you never appreciate where you are until you look back whence you came." Georgia cannot boast of having the first state health department, but today she does not fear comparison of her health department with others, and whatever accomplishments the Georgia Department of Public Health has made can very largely be attributed to the counsel, advice and cooperation of organized medicine. The Medical Association of Georgia through its Advisory Committee to the State Board of Health, and the private physicians as a whole, have been of inestimable value.

Neither can Georgia boast of having the first organized county health department, but she was among the very first states to organize a county health department for the purpose of instituting a complete, generalized health service. The first county health department was started for the control of a typhoid epidemic. The purpose of the second was for the protection of one group, the school children. The health laws of Georgia passed in 1914, establishing a board of health for each county, and providing for a department of health in each county under certain conditions, anticipated and specifically made provision for a complete health protection and health improvement for all groups and ages.

As we "look back whence we came," we see several things that stand out very prominently. First, the earlier health officer's duties, in the mind of the public, were that of a "police officer" to institute quarantine and vaccinate against smallpox. His services were sporadic and were demanded or offered only after an outbreak of disease. A little later, when immunizations were made available for other diseases, he came to be known as the doctor who "gives shots," and the school doctor.

Second, the health officer was usually a physician engaged in private practice, and devoting only a small part of his time to public health. Although he was probably well prepared as a surgeon or internist, he was lacking in training in epidemiology and other phases of public health; or he was a very recent graduate in medicine; or he had given the best years of his life to other branches of medicine and in appreciation of his useful life, or for political reasons, he was elected health officer. Neither the young nor the old man may have had any special training, qualifications, or even "inclination," that fitted him for the place.

Third, in Georgia, and in this nation, more progress has been made in public health within the last few years than in any other twenty-five years or more. The Social Security Act passed by Congress in 1935, in Titles V and VI, was the greatest boost public health has ever received. Among the first effects of this bill was the establishment of standard qualifications for public health workers of all kinds. In addition, financial assistance was made available for training suitable persons who wished to specialize in public health, and to subsidize state and local health departments. Later the adoption of a merit system for public health workers further stressed the necessity for trained personnel and added to the attractiveness of public health as a career. Although public health departments in Georgia have been conspicuously free from political influence, the merit system further removed the possibility of such happening.

Not the least result of a better-trained corps of public health workers has been the recognition by the public, including the doctors, that a public health worker is more than a quarantine officer or one who gives "shots." Today, the people expect the health department to prevent epidemics rather than to stop them. It is expected of a health department that it will prevent *all* communicable diseases, as tuberculosis and syphilis, as well as diphtheria, smallpox and typhoid. It has been realized that school children are first infants, and that the best health service to the child of school age can be rendered in the years before he goes to school. Even so, as the healthy infant and preschool child is the best insurance for a healthy school child, so is a healthy mother-to-be the best insurance for a healthy infant. Essential to all of these aims is and has been environmental sanitation.

This is a "bird's eye view" of "whence we came." Now for a few words as to where we are! The above worthy objects of all public health workers are paramount still, but others have been added. "Communicable Disease Control" has given place to "Preventable Disease Control." This means the inclusion of such diseases as rickets, scurvy, pellagra, and general nutritional disorders. Included also are occupational diseases and industrial hygiene, cancer control, dental health, and others. Education of the general public in the elemental facts as to the cause, mode of transmission, and methods of prevention of infectious and communicable diseases is a recognized function of a public health department. Public health education programs also include mother care, prenatal care,

infant and preschool care, nutrition, habit formation, mental hygiene, and many others.

As great as have been the changes and advances made in public health in the last few years, the observant and thinking person must realize that the next few years must bring about many more advances. Dr. Thomas Parran, Surgeon General of the United States Public Health Service, in a recent issue of the AMERICAN JOURNAL OF PUBLIC HEALTH, said: "Important as has been the task of public health workers in the past, it is of transcendent urgency now in the battles to defend our freedom. Not only must we hold the lines against preventable disease in the population sustaining the armed forces and producing the essentials of war; we must also translate scientific fact into positive action for three-thirds of our people in order to raise the level of strength, endurance and morale for the grim work ahead."

Every phase of public health work may be classed as essential to national defense, and justly so. However, in the present world emergency, specific problems, changing daily, face public health departments, and must be dealt with immediately. Space does not permit mentioning them in detail, but some of them are quite obvious to a casual observer. Many are not so evident, although more urgent, as well as more intricate.

These problems are further complicated by the call to service in the armed forces of a large number of physicians and sanitary engineers that were considered necessary for the conduct of a normal program. It is, therefore, evident that if the emergencies arising because of our national defense program are met, and they must and will be met and dealt with by our reduced personnel, some other activity or activities, however meritorious they may be, must be sidetracked for a while. Let us hope for a short while only!

Public health departments may be depended upon to exert every possible effort to adequately meet the demands that may be made upon them. The present emergency will demonstrate to all people the value of and the urgent need for more complete public health service for every county and community. It will also show public health departments and workers the defects that may have been present in past programs, and point the way for improving and enlarging public health work. We may look forward with confidence to this time.

GUY G. LUNSFORD, M.D.

Appling-Altamaha County Medical Society

The Altamaha Medical Society announces the following officers for 1942:

President.....E. J. Overstreet, Baxley
Vice President.....H. C. McCracken, Baxley
Secretary-Treasurer.....J. T. Holt, Baxley
Delegate.....H. C. McCracken, Baxley

WOMAN'S AUXILIARY - DEPARTMENT

(Continued from page 213)

Murdock Equen, president of the Woman's Auxiliary to the Fulton County Medical Society, gave an excellent report of the year's work. Mrs. Jeff Richardson, chairman for the district of health films, reported that 235 films had been shown to 12,120 people during the year at 140 showings, this truly remarkable record calling for enthusiastic commendation. Dr. Paul I. Hoxworth, of the department of surgery at the University of Cincinnati in Cincinnati, Ohio, who has done extensive research in all phases of blood transfusion, spoke on "Plasma" and later members of the Auxiliary joined members of the society to see a movie in which Dr. Hoxworth graphically showed the progress of work along this line. The resignation of the vice-president, Mrs. H. G. Ansley, was accepted with regret and the president was empowered to appoint a new vice-president.

NATIONAL CONVENTION

Members of the Woman's Auxiliary to the Medical Association of Georgia are reminded that the twentieth annual convention of the Woman's Auxiliary to the American Medical Association will be held at Atlantic City, N. J., June 8-12. Headquarters will be Haddon Hall and those desiring reservations should make them immediately.

GEORGIA STATE NURSES' ASSOCIATION

(Continued from page 215)

but we find we are not afraid now. Maybe it is because we don't know what war is. We have been so well taken care of up to now and every precaution has been taken for our safety. Most of us would like to be right up to the fighting front, and we think we can do the same good job there as our sister nurses have done on Bataan. Wherever they put us, we will do our best. We'll do everything we can to look after your sons and husbands. It is a job we're proud to do, and we'll try to do it proudly."

Even in the most disastrous wars it is clear that the casualties are trivial in comparison with the annual morbidity and mortality from wholly preventable causes suffered by the population. Along with the expenditure of dizzy billions to combat foreign foes, it would seem the part of wisdom to devote a respectable amount of our defense energies and resources to the conquest of the ever present and very real foes within our domestic circle, if for no other reason than the fact that the first line of military defense is the health of the civilian population.—K. E. Miller, Med. Dir., Pub. Health Serv., Amer. Rev. of Tuber., Dec., 1941.

In preparation for just such an emergency as the country now faces the Red Cross has been spending funds at the rate of more than $1,000,000 a month. However, with war in the Pacific now a reality the traditional Red Cross responsibilities to the nation and its armed forces have increased manifold and steps were taken immediately to meet these obligations.

EMORY MEDICAL CLINICS
June 2, 3, 4, 1942

Tuesday, June 2

8:00- 9:00 Registration at College, corner Butler and Armstrong Streets (Colored Unit).

Grady Hospital, White Unit

8:00-10:00 Operative Clinic—Drs. Julian Riley and Lynn Fort.

Grady Hospital, Colored Unit

Dr. L. L. Whiddon, Presiding

8:30- 9:00 Dr. Philip Nippert — Treatment of Acne Vulgaris.

9:00- 9:30 Drs. J. D. Martin and C. S. Ward, Jr.,— Sulfonamides in the Treatment of Appendiceal Peritonitis.

9:30-10:00 Dr. George Williams — Diagnosis of Leukorrhea.

10:00-10:30 Dr. E. F. Fincher—Spinal Cord Tumors.

10:30-11:00 Dr. B. T. Beasley—Functional and Pathologic Changes in the Female Breast.

11:00-11:30 Dr. E. H. Greene—Treatment of Disorders of Menopause.

11:30-12:00 Dr. Hal Davison—Treatment of Hay Fever.

12:30- 1:00 Medical Clinic—Dr. Cyrus W. Strickler, Sr.

Dr. M. C. Pruitt, Presiding

2:00- 2:30 Dr. J. F. Denton—Tuberculosis of the Cervix.

2:30- 3:00 Dr. Samuel Sinkoe—The Diagnosis and Management of Renal Cysts — Lantern Slides.

3:00- 3:30 Dr. Mark Dougherty—Diagnosis and Medical Treatment of Chronic Cholecystitis.

3:30- 4:00 Dr. Henry Poer—Internal Abdominal Injury without External Wound.

Wednesday, June 3

Grady Hospital, White Unit

8:00-10:00 Surgical Clinic—Drs. A. S. Sanders, Henry Poer and Jesse York.

8:00-10:00 Surgical-Proctologic Clinic — Dr. M. C. Pruitt.

Grady Hospital, Colored Unit

Surgical Clinic—Dr. Dan Elkin

Dr. R. H. Oppenheimer, Presiding

8:30- 9:00 Dr. T. L. Byrd—Diabetes Mellitus in the Negro.

9:00- 9:30 Dr. I. A. Ferguson—Esophageal Obstruction.

9:30-10:00 Dr. C. W. Roberts—Problems in Diagnosis —Illustrated by case reports.

10:00-10:30 Dr. T. C. Davison—Toxic Goiter.

10:30-11:00 Dr. J. B. Fitts—Ileocecal Lesions that Produce Digestive Disease.

11:00-11:30 Dr. J. W. Landham—X-Ray Studies of Gallbladder—Lantern Slides.

11:30-12:00 Dr. J. E. Paullin—The Psychoneuroses.

12:00-12:30 Dr. J. L. Campbell—Basic Principles in the Treatment of Cancer.

12:30- 1:00 Dr. J. L. Richardson—Treatment of Various Types of Cardiac Disease.

Dr. George Fuller, Presiding

2:00- 2:30 Dr. F. K. Boland—Incidence of Surgical Disease.

2:30- 3:00 Dr. Howard Hailey—Eczema at the Body Openings.

3:00- 3:30 Dr. S. A. Kirkland—Cysts of the Kidney.

3:30- 4:00 Drs. E. G. Ballenger, Harold McDonald and R. C. Coleman, Jr.—Urologic Hints.

Thursday, June 4

Grady Hospital, White Unit

8:00-10:00 Gynecologic Clinic—Dr. L. G. Baggett.

Grady Hospital, Colored Unit

Dr. Allen H. Bunce, Presiding

8:30- 9:00 Dr. A. J. Merrill—Sulfonamide Reactions.

9:00- 9:30 Dr. B. H. Boyd—Placenta Previa.

9:30-10:00 Dr. Murdock Equen Laryngeal Cancer.

10:00-10:30 Dr. Dixon Fowler The Use of the Sulfanil Drugs.

10:30-11:00 Dr. Harry Lange—Hemorrhagic Disease of the Newborn.

11:00-11:30 Dr. R. W. Dickson—Pyloric Stenosis.

11:30-12:00 Dr. W. H. Kiser, Jr.—Respiratory Obstruction Due to the Thymus.

12:00-12:30 Dr. Joseph Yampolsky—The Etiology and Treatment of Convulsive Seizures.

12:30- 1:00 Dr. W. W. Anderson—Prematurity.

Dr. J. A. Redfearn, Presiding

2:00- 2:30 Dr. Hugh Wood—Gastro-intestinal Manifestations of Vitamin B Deficiency.

2:30- 3:00 Drs. Allen H. Bunce and Carter Davis— Problems in Obesity.

3:00- 3:30 Dr. W. A. Selman—Postoperative Decompression of the Intestinal Tract.

3:30- 4:00 Dr. J. C. Massee—Phonocardiography.

7:00 P. M. Buffet Supper—Academy of Medicine, 875 W. Peachtree St., N. E.

8:00 P. M. Dr. L. L. Whiddon, Presiding—Election of Officers.

Dr. Walter Jones, Miami, Florida—Reflexes Observed During Abdominal Surgery — Lantern Slides.

Dr. W. B. Clark, Professor of Ophthalmology, Tulane University, New Orleans—A Kodochrome Clinic of Anterior Segment Eye Diseases.

Dr. W. K. Purks, Vicksburg, Miss.—The Internist's Responsibility Regarding Surgical Problems of the Geriatric Patient.

Dr. E. A. Stead. Jr., Professor of Medicine, Emory University, Atlanta—The Teaching Program in the Department of Medicine.

The eighteenth scientific meeting of the American Heart Association will be held June 5-6, 1942, at Chalfonte-Haddon Hall, Atlantic City, New Jersey. The American Medical Association will hold its ninety-third annual session in Atlantic City June 8-12.

NEWS ITEMS

THE FULTON COUNTY MEDICAL SOCIETY met at the Academy of Medicine, Atlanta, May 4. Titles of papers and essayists on the program were: *Psychosomatic Illnesses of Urban Practice* by Dr. R. S. Leadingham, discussed by Captain Lewis Thorne of Lawson General Hospital, Atlanta, and Mr. Howard Hush with the Family Welfare Society. *The Care of Premature Infants* by Dr. William Willis Anderson, discussed by Dr. Edwin R. Watson, Ga. Dept. of Public Health, and Dr. James P. Hanner. Contributors to the May 4, 1942, issue of The Bulletin were: Dr. Majer F. Fowler, president; Dr. Roy R. Kracke, Dr. Abraham S. Velkoff and A. Drew Ferguson, Dr. L. Minor Blackford, Dr. J. K. Fancher.

THE STAFF MEETING OF EMORY UNIVERSITY HOSPITAL was held on May 6. Dr. F. P. Calhoun presented a portrait of the late Dr. Stewart R. Roberts. Dr. J. E. Scarborough made a report of a case of a *Carcinoma of Breast—5 Year Results;* Dr. C. H. Paine reported a case of *Carcinoma of Esophagus.* Dr. E. Van Buren reported on the meeting of the American College of Physicians.

THE BIBB COUNTY MEDICAL SOCIETY met at the Baconsfield Club House, Macon, May 5. Dr. J. C. Thoroughman, Atlanta, spoke on *Phases of Medicine in China.*

THE EIGHTH DISTRICT MEDICAL SOCIETY met at Valdosta on April 14. Dr. Chas. Milton Carpenter, associate professor of bacteriology at the University of Rochester School of Medicine, Rochester, N. Y., spoke on the *Community Control of Gonorrhea.*

DR. A. J. WARING, Savannah, president of the Savannah Health Center, has appointed the following doctors to serve on various committees: Dr. Chas. C. Hedges, Dr. C. F. Holton. Dr. E. N. Maser, Dr. H. F. Sharpley, Jr., Dr. R. V. Martin, Dr. J. L. Elliott, Dr. Lawrence Lee, all of Savannah.

DR. LEE HOWARD, Savannah, made two talks during the week of April 13-18 before meetings of the Association of Medical Assistants. His first address was on the *Georgia Division of the Women's Field Army of the American Society for the Control of Cancer;* later he spoke on *The Role of Medical Assistants in Local Defense.*

GEORGIA MEDICAL SOCIETY, Savannah, met on May 12. Program consisted of symposium on *War Wounds.* Lieut. Ellis Arkus and Capt. Frank Shaffer led the discussion. A picture on *Regional Anesthesia* was shown.

THE SUTHERN MEDICAL ASSOCIATION will meet in Richmond, November 9-12.

DR. HENRY RICHMOND SLACK, LaGrange, celebrated his eightieth birthday on May 7. He was born in 1862 and graduated in medicine at Emory University School of Medicine in 1891. He first graduated in pharmacy and later in medicine. Dr. Slack took a post-graduate course at Johns Hopkins University School of Medicine, Baltimore, and at medical schools in New York City. After this he located at LaGrange to begin practice. He was one of the first physicians to use diphtheria antitoxin. He and Dr. James N. Brawner were placed in active management of the Georgia Pasteur Institute in Atlanta to make and supply anti-rabies treatment. This was one of four such institutes in the United States at that time. For eight years he served as president of the Institute and supplied anti-rabies treatment for more than 600 people with only three lost. In 1902 he built the first sanatorium in LaGrange and operated it for sixteen years. After Mr. J. E. Dunson offered a gift of $10,000 in 1918 for the building of a city hospital, Dr. Slack offered Dr. Slack's Sanatorium to the city and deducted $10,000 from the sale price and became joint donor in the purchase of the institution. Dr. Slack filled the chair of chemistry at the old Southern Female College at LaGrange for 12 years; secretary and chemist for the State Board of Pharmacy for 12 years; and he served several terms as a member of the convention for the Revision of the U. S. Pharmacopea.

THE BIBB COUNTY MEDICAL SOCIETY, Macon, met on April 21. The program consisted of a discussion of *Sex Hormones*—Physiology, Diagnosis, Therapy—Illustrated in Technicolor. Dr. D. K. Kitchens, former professor of endocrinology of the University School of Medicine, Little Rock, Arkansas.

DR. F. M. MULLINO, Montezuma, has been practicing medicine in Macon and adjoining counties for 49 years. He is yet active and if on account of tire shortage, if necessary, he states that he will again return to the use of a horse and buggy.

THE CRAWFORD W. LONG MEMORIAL HOSPITAL, Atlanta, announces that no meeting of the staff will be held in May on account of so many building changes being made.

THE VISITING STAFF OF GRADY HOSPITAL, Atlanta, met May 12. Dr. Claude T. Prevost reported a case, *Waterhouse-Friederichson Syndrome;* Dr. A. S. Velkoff, *Bi-Lateral Dry Gangrene of the Lower Extremities Due to Ergot.* President of the staff, Dr. Jeff L. Richardson, Atlanta; Chairman of Program Committee, Eleanor Townsend, Atlanta.

DR. AND MRS. C. T. HARDMAN, Tallulah Falls, entertained members of the Habersham County Medical Society and the Woman's Auxiliary at a barbecue at their home on May 7.

THE BIBB COUNTY MEDICAL SOCIETY met at Ridley Hall, Macon, May 19. The program consisted of case reports.

THE STAFF MEETING OF THE GEORGIA BAPTIST HOSPITAL, Atlanta, was held on May 19. Dr. Charles Rieser was in charge of the Clinico-Pathological Conference; Dr. J. C. Blalock reported a case of *Mixed Cell Tumor of the Pancreas.* Major Earl Lowry of Lawson General Hospital discussed the organization and functions of this type of military work.

THE FULTON COUNTY MEDICAL SOCIETY met at the Academy of Medicine, Atlanta, May 18. Dr. Lon Grove

and Dr. Earl D. Rasmussen spoke on *Diseases of the Pancreas Neoplasms of Ampulla of Vater;* Dr. John Ross McCain, *Acute Pancreatitis*, discussed by Dr. Warren B. Matthews, Dr. Hugh Wood, Dr. Arthur J. Merrill and Dr. Crawford F. Barnett. Contributors to The Bulletin of the Society included: Dr. Major F. Fowler, President of the society; Dr. L. Minor Blackford, Dr. Jeff L. Richardson. Dr. H. C. Sauls, all of Atlanta.

OBITUARY

Dr. Daniel Matthews Carter, Madison: member; Atlanta College of Physicians and Surgeons, Atlanta, 1912; aged 60; died on April 11, 1942. He was a native of Gwinnett County. Dr. Carter was progressive and took post-graduate work in New York City; was a member of the Madison Board of Health; F. & A. M.; Shrine; and the Madison Methodist church; and local surgeon for the Central of Georgia Railway. He practiced medicine in Morgan and adjoining counties for 24 years. "Dr. Carter was incarnated good will, kindliness, unselfishness. He was a fountain of tenderness, compassion and love. He would decline fees from his patients when they proffered them saying: 'Just put this off till some other time, you will need this money more than I.' And when remonstrated with he would dismiss the matter with, 'Why, to take that would be to take bread from the children's mouths.' He was sometimes heard to say, when a patient said to him I will pay you as soon as I can, 'Let that be the last and least of your worries.'" Surviving him are his widow, three daughters, Gladys and Harriet Carter, of Madison, and Mrs. O. V. McNeece, Athens. Funeral services were conducted by Dr. J. C. Patty from the Methodist church. Burial was in the city cemetery.

Dr. Andrew Cornelius Dorminy, Hoboken; member; Atlanta College of Physicians and Surgeons, Atlanta, 1911; aged 61; died on March 19, 1942, in a Veterans' Hospital in Florida. He was a World War veteran. Had practiced medicine and ran a drug store at Hoboken for many years. Dr. Dorminy was an active member of the American Legion. Surviving him are two daughters, Mrs. J. P. Williams and Mrs. C. H. Welch, Jr., both of Birmingham; two sons, Billy and Elkin Dorminy, both of Hoboken. Rev. A. M. McCool and Rev. Earl Stirewalt officiated at the funeral services conducted at the Hoboken Baptist church. Burial was in Hoboken cemetery.

Dr. Edward Perrone Overby, East Point; Southern Medical College, Atlanta, 1883; aged 86; died March 31, 1942. He was a native of Palmetto. For many years he practiced and operated a drug store at Powder Springs, later he married and moved to East Point and lived there for 40 years. Surviving him are three daughters, Mrs. J. W. Wallis, Mrs. R. T. Jackson and Mrs. C. E. Hutcheson. Rev. E. C. Wilson, Rev. Roy Cooper and Rev. W. A. Duncan officiated at the funeral services. Burial was in Hill Crest cemetery.

Dr. John Wade Chambless, Americus; member, Atlanta School of Medicine, Atlanta, 1907; aged 61; died on April 6, 1942. He was a native of Marion County. He practiced medicine in Sumter and adjoining counties for more than 30 years. He was charitable and a good citizen. Surviving him are his widow, two sons, J. Wade Chambliss, Jr., Americus, and Ross M. Chambliss, Cordele. Dr. L. M. Polhill and Rev. James B. Lawrence officiated at the funeral services conducted at the First Baptist church. Interment was in Oak Grove cemetery.

Dr. William Edward Miller, Ludowici; College of Physicians and Surgeons of Baltimore, Md., 1898; aged 73; died April 14, 1942, at the home of his sister. He had practiced medicine for more than 40 years and it has been said that he was one of the most charitable in dealing with people of limited means. Surviving him are his widow, two daughters, Mrs. Stanton Walker and Miss Christine Miller of Jacksonville, Florida. Rev. M. A. Murray officiated at the funeral services conducted at the Walthourville Presbyterian church. Burial was in the church yard.

Dr. John Chesley Stewart, Atlanta; member; Atlanta School of Medicine, Atlanta, 1910; aged 65; died on April 9, 1942. He was a native of Pickens County and attended the North Georgia Military College at Dahlonega. For several years he taught school in Arizona, then practiced medicine in Atlanta for 20 years, was a member of the Grady Hospital staff and the Fulton County Selective Service Board No. 6. He maintained an office in Atlanta and Jonesboro. Surviving him are his widow, three daughters, Misses Frances, Katie and Evelyn Stewart, all of Atlanta; two sons, Dr. Roy A. Stewart of Baltimore, and Ralph S. Stewart of Atlanta. Funeral services were held at the Capitol View Baptist church. Rev. W. L. Cutts officiated. Burial was in Roseland cemetery.

Dr. Alexander W. Burch, Lincolnton; University of Georgia School of Medicine, 1889; aged 76; died at his home on April 17, 1942. He was a native of Elbert County. He moved to Lincoln County in 1890 and practiced medicine there for 50 years. Dr. Burch was a member of the Board of Education and the city council for a number of years, member and officer of the Methodist church. "His long service to the people will cause his memory to linger long in the hearts of those who were recipients of his unselfish and skilled benefactions. Hundreds of friends from all over the county and throughout this section were present to pay final tribute to their long-time friend. Surviving him are his wife, two daughters, Mrs. John E. Hammond, Greer, S. C.; and Miss Elizabeth Burch, Lincolnton; three sons, Alex W. Burch, Jr., Henry and Lee Burch. Rev. L. S. Baugh officiated at the funeral services conducted at the Methodist church. Burial was in the city cemetery.

VICE PRESIDENT OF UPJOHN FIRM DIES

Malcolm Galbraith, vice president and director of sales of the Upjohn Company, died Friday morning, April 10, in Kansas City.

Mr. Galbraith was born in Bowmanville, Ontario, Canada, October 23, 1876. He received his bachelor

of pharmacy degree at Ontario College of Pharmacy in 1893, entering in the drug business in Ontario the same year. He later became a naturalized citizen of the United States. In 1909 he left the H. K. Mulford Company, of Philadelphia, to join the Upjohn Company. In October, 1929, he was elected to the board of directors and named director of sales. He was made vice president of the company in May, 1936.

OFFICE OF CIVILIAN DEFENSE

WASHINGTON, D. C.

May 1, 1942

To: Editors of Medical, Hospital and Related Journals.
From: George Baehr, Chief Medical Officer.

We are attaching supplementary information with reference to the Blood and Plasma Bank Program of the Medical Division of the Office of Civilian Defense, a preliminary announcement of which was sent to you on March 19, 1942.

The attached regulations include directions for making applications for grants.

It is hoped that you can publish this announcement and these regulations in the next issue of your journal.

Attachments.

May 1, 1942.

To Editors of Medical, Hospital and Related Journals:

Regulations for the administration of the Blood and Plasma Bank Program of the Medical Division of the United States Office of Civilian Defense have now been prescribed, and funds are available for grants to assist approved hospitals in establishing blood and plasma banks. Only hospitals within 300 miles of the Atlantic, Pacific or Gulf coasts are eligible for such grants. After July 1, 1942, these geographical restrictions may be modified, so that grants may be made to inland hospitals. Applications should be addressed to the Chief Medical Officer, United States Office of Civilian Defense, Washington, D. C.

Technical manuals on blood and plasma banks, prepared by the Subcommittee on Blood Substitutes of the Division of Medical Sciences, National Research Council are now available for distribution on request of any hospital to the Chief Medical Officer, Office of Civilian Defense.

The Red Cross has established eighteen donor centers in various parts of the country which are successful in obtaining an adequate supply of blood donors for military purposes. Blood for the production of dried plasma for Civilian Defense purposes will also be obtained from these sources.

Hospitals which establish their own blood and plasma banks with the financial assistance of the Office of Civilian Defense are advised to build up their reserves of blood and plasma by expanding blood collection from relatives and friends of patients who are to receive transfusions. A public campaign for volunteer donors which may compete with the work of the Red Cross should be avoided if possible. If public solicitation is necessary, hospitals should appeal to the local chapters of the American Red Cross for assistance in recruiting hospital donors. Blood donor campaigns by agencies other than the Red Cross will tend to confuse the public and may interfere with the blood collection by the Red Cross for the armed forces.

April 17, 1942.

REGULATIONS GOVERNING GRANTS TO HOSPITALS FOR ESTABLISHING RESERVES OF BLOOD PLASMA

WHEREAS: On April 11, 1942, there was allotted from the "Emergency Fund for the President" to the United States Public Health Service the amount of $292,500, "to be expended by said Public Health Service in connection with emergencies affecting the national security and defense for procuring and establishing either independently or, subject to regulations to be promulgated by the Surgeon General, by grants to public and private hospitals located not more than 300 miles from ocean or Gulf Coast, reserves of liquid, frozen or dry blood plasma or serum albumin for the treatment of casualties resulting from enemy action," the following regulations are promulgated to govern the administration of this allotment:

SECTION I. ELIGIBILITY FOR GRANTS

Preference shall be given to hospitals serving communities whose geographical location implies a likelihood of civilian casualties from enemy action, and which are inadequately equipped to handle such casualties.

To be eligible for a grant a public or private hospital located not more than 300 miles from ocean or Gulf Coast* shall:

(1) Have a capacity of not less than 200 beds, exclusive of bassinets, provided that two or more smaller hospitals totaling 200 beds may submit a cooperative project designating one of the participating hospitals as the grantee;

(2) Be on the approved list of the American College of Surgeons and the Hospital Register of the American Medical Association;

(3) Have on the professional staff a physician whose qualifications are the equivalent of those required by the American Board of Pathology for its diplomates.

SECTION II. APPROVAL OF PLANS

A grant shall cover a period of not more than twelve months following the approval of the plan, or not beyond June 30, 1943, and may be used only for the purchase of equipment necessary for the preparation of liquid or frozen plasma, reconditioning or minor alterations of existing quarters, necessary travel and subsistence allowance of $6.00 per diem to cover a training period, if required, of not more than one week, for the physician directing the blood plasma project, and temporary salaries of personnel necessary for the establishment of a blood and plasma project.

The maximum grant for one hospital is $2,000.

A hospital desiring to receive a grant shall submit a plan to the Chief Medical Officer, Office of Civilian Defense, who is authorized to receive such plans on behalf of the Surgeon General of the United States

Note: The Appropriation Act for the fiscal year 1943 may not limit grants to hospitals within this geographical area.

Public Health Service. A plan shall contain the following information:

(1) The number of hospital beds classified according to use;

(2) The name and qualifications of the physician who will direct the plasma project;

(3) Description of present blood and plasma project, if any;

(4) The type and amount of plasma reserves which the institution desires to prepare;

(5) The delivered price of equipment necessary to complete the existing facilities for preparing such plasma—such items to be numbered and described in accordance with the equipment inventory in "A Manual on Citrated Normal Human Blood Plasma," issued by the Office of Civilian Defense, or equivalent approved substitute equipment.

(6) The materials or labor, if any, needed for adapting existing quarters to the needs of the blood plasma project;

(7) The salaries, if any, to be paid additional personnel until the plasma reserve has been prepared. Salary items shall also show the proposed periods of employment for each individual and the proposed monthly rates of pay.

When a plan is recommended by the Chief Medical Officer of the Office of Civilian Defense for the approval of the Surgeon General, the hospital will be furnished a budget and acceptance form to be signed, notarized and returned to the Chief Medical Officer, Office of Civilian Defense.

Section III. Conditions of Grants

(1) The hospital shall agree to build up a plasma reserve of at least one unit per bed within three months after delivery of the necessary equipment. A unit of plasma is that amount derived from 500 cc. of citrated whole blood, consisting of about 250 cc. of liquid plasma;

(2) The agreed amount of plasma reserve shall be maintained for use without charge and only for treatment of casualties caused by enemy action. The reserve shall be released for use in other local hospitals for this purpose on order of the local Chief of Emergency Medical Service and for transfer within the state on order of the State Chief of Emergency Medical Service, or transfer from one state to another on the order of the Regional Medical Officer, Office of Civilian Defense;

(3) Liquid plasma shall be kept from being outdated by replacement of older by newer plasma. Replaced units may be utilized for current needs of the hospital in the treatment of its regular patients, provided the plasma reserve shall not be allowed to fall below the stated minimum;

(4) All plasma shall be prepared in accordance with manuals of the Office of Civilian Defense prepared by the Subcommittee on Blood Substitutes of the National Research Council;

(5) The hospital shall agree to continue the plasma project for its current needs after the expiration of the Federal Grant and to maintain for the duration of the war the minimum stated reserve; thereafter the reserve may be used by the hospital without restriction;

(6) A record shall be kept of all blood donors, including their blood types, to expedite obtaining donors for emergencies;

(7) No funds made available under the grant shall be used for the payment of blood donors;

(8) Any blood plasma project under this program shall be subject to inspection by authorized representatives of the Surgeon General of the Public Health Service.

Section IV. Method of Payment

Payments will be made on a reimbursement basis for expenditures made in accordance with the approved budget. Applications for reimbursement shall be notarized and addressed to the Chief Medical Officer, Office of Civilian Defense. The procedure for payment will be as follows:

(1) Payments from the allotment to cover the purchases of non-expendable equipment aggregating $300 or more will be paid upon receipt from the authorized administrative head and accounting officer of the hospital, of an itemized statement of the purchases supported by invoices showing the date of delivery of such equipment.

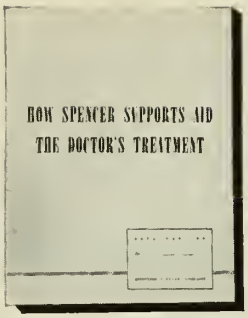
(2) Payment will be made for the authorized training expenses of the physician who is to direct the blood plasma project. Other methods of payment omitted for lack of space.

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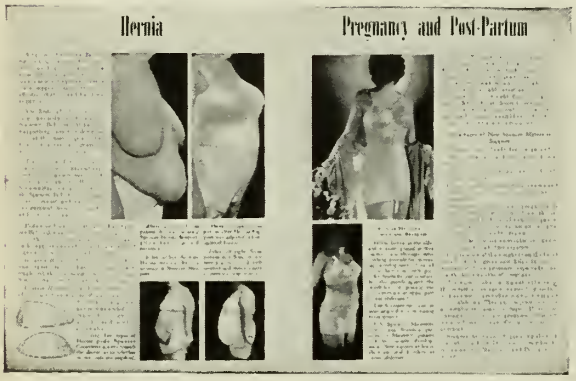
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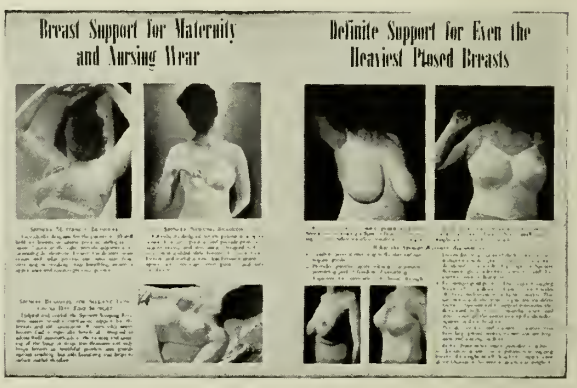
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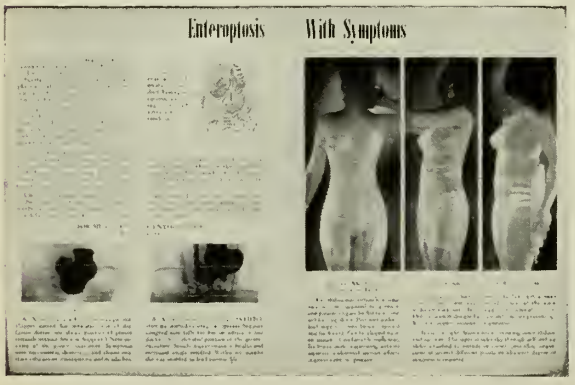
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GRANULOSA CELL TUMORS OF THE OVARY

WALTER R. HOLMES, M.D.
ALLEN E. HAUCK, M.D.
Atlanta

This is a report of five cases of granulosa cell tumors of the ovary. Tumors of this type are of clinical interest because they represent a striking example of functioning neoplasm. The elaboration and secretion of hormones by these tumors cause physiologic effects on their hosts. These effects as related to the menstrual cycle in the cases reported may serve as a basis for consideration of the endocrine mechanism of normal and abnormal menstruation.

Although the histogenesis of granulosa cell tumors is not definitely known, most writers agree that they arise from undifferentiated mesenchyme cells of the ovary. The numerous case reports of these tumors in recent years indicate that they are not a rare neoplasm. In 400 solid ovarian tumors at the Mayo Clinic there were 30 granulosa cell tumors found. In another series 18 granulosa cell tumors were found in 492 solid ovarian tumors. Pund reports an incidence of 10 in 280 solid tumors; approximately 10 per cent were bilateral. Reports on malignancy of the tumors vary considerably but an analysis of 187 cases reveals that 17.4 per cent were malignant.

PATHOLOGY

Granulosa cell tumors may vary greatly in size from microscopic nodules to a growth 15-20 cm. or more in diameter. They are usually well encapsulated and may be solid or cystic in character. The microscopic picture varies and by pathologists has been divided into folliculoid, cylindromatoid and sarcomatoid types:

1. The *folliculoid* type tends to produce the tissue to which it is related, thereby resembling the graafian follicle. This form produces large amounts of estrogenic hormone and is thereby more apt to produce changes expected with increased estrogens.

2. The *cylindromatoid* type to which the majority of these tumors belong shows less differentiation of cells than in the folliculoid group, but the production of estrogenic hormone is also high and therefore bleeding and hyperplastic endometrium are to be seen.

3. The *sarcomatoid* group shows very little differentiation and consequently it is in this group that most of the malignant granulosa cell tumors are found. Because of the lack of maturation of these cells there may be little or no hormonal production and consequently no clinical manifestations, other than mechanical.

CLINICAL MANIFESTATIONS

Granulosa cell tumors may be present at any age. Approximately 60 per cent of the tumors occur after the menopause, 30 per cent during the childbearing period, and 10 per cent before puberty. Many cases are asymptomatic and are found during routine examinations or as incidental findings in the course of operations for other disease. The clinical manifestations are due entirely to the effects of the elaborated estrogens or to the mechanical disturbance of the abdominal mass.

The clinical symptoms will depend on the age group in which the tumor occurs. On this basis they may be divided into three groups: prepuberty, premenopausal, and postmenopausal.

1. *Prepuberty* group. Precocious sexual development is the most frequent manifestation in this age group. This is recognized by early maturation, growth of pubic and axillary hair, enlargement of the breasts and precocious menstruation. There is an early union of the bony epiphyses, narrowing and lengthening of the nails, and early maturation of the genitals. The uterus is larger than normal and the vaginal mucous membrane changes from infantile to adult type. These symptoms are usually associated with a palpable solid ovarian tumor. The precocious development need not be accompanied by uterine bleeding because granulosa cell tumor sometimes is not associated with endometrial changes.

2. *Premenopausal* group. The clinical manifestations

Read before the Medical Association of Georgia, Macon, May 15, 1941.

of granulosa cell tumors in this age group vary somewhat depending upon the hormonal imbalance wrought by the tumor. Amenorrhagia or menometrorrhagia may be present. The menstrual symptoms are similar to those seen in the so-called functional bleeding cases. Associated nervousness is often a striking symptom. The patient runs the gamut of nervous symptoms and may be erroneously classified as neurotic. Sterility is usually present.

3. *Postmenopausal* group. Nervousness is again prominent in the symptomology of granulosa cell tumors in this age group, along with enlargement and soreness of the breasts, enlargement of the uterus and cystic hyperplasia of the endometrium. Bleeding, either periodic or continuous, is usually present. The vaginal mucous membrane is usually like that seen in menstruating women instead of the senile type of the postmenopausal age. (A palpable tumor is usually found but this is not necessarily true). The blood and urinary estrogenic content is high.

The following is a presentation of five cases reported, three of whom were in the postmenopausal group, one in the premenopausal group, and one in the prepuberty group:

Reports of Cases

Case 1. A married white female, aged 42, para 5, was admitted to Emory University Hospital, Atlanta. Nervousness, fatigability, frequent headaches, feeling of tenseness, loss of weight, sleeplessness, generalized aches and pains were her chief complaints.

Her menstrual history was significant. Onset of period at age 13; periods regular every 28 days until four years ago when she ceased menstruating. Patient thought she was passing through the menopause. She had severe headaches, usually in the top of her head, and a feeling of tenseness. She often had a feeling as if blood was rushing to her head, and her ears felt tense and hot. She had lost 18 pounds in weight; slept poorly because of nervousness; has worried a great deal and feels tired all the time.

Pelvic examination revealed marked perineal laceration with rectocele and cystocele; uterus retroverted and enlarged beyond normal limits. There was a normal healthy appearance of the vaginal mucous membrane. There was a mass in the region of the right ovary, approximately 5 cm. in diameter, which was firm, smooth and freely movable. The preoperative diagnosis was ovarian fibroma, relaxed vaginal outlet, cystocele, and rectocele.

A perineal repair was done and three weeks later an abdominal operation was performed. At operation a tumor was found replacing the right ovary, approximately 6 x 7 cm. in diameter. It was encapsulated and freely movable. Left ovary was normal. Right salpingo-oophorocystectomy and appendectomy were performed.

Pathologic report (Dr. Roy R. Kracke) stated: "Gross specimen consists of a tumor of the ovary, the Fallopian tube and the appendix. The tumor is solid and measures about 6 x 7 cm. It is well encapsulated and the cut section shows a lobulated appearance. It is rather fleshy in character and shows what appears to be several areas of degeneration. There are trabeculae of fibrous tissue extending throughout.

"Microscopic sections show the ovarian tissue to be fairly completely replaced by areas of fibrosis separating groups of cells that are arranged in somewhat circular arrangement with elongated nuclei pointing toward the center; the cells being rather light color in the cytoplasm with fairly uniform nuclear staining. Typical of granulosa cell carcinoma of the ovary.

"Diagnosis: granulosa cell carcinoma of the ovary."

Patient made an uneventful postoperative recovery. Nervousness was decidedly improved. Menstrual history following her operation is significant: six days after the operation patient menstruated normally for the first time in four years; since this time she has menstruated regularly every 28 days.

Case 2. An unmarried white female, aged 62, was admitted to Emory University Hospital, Atlanta, with the complaint of vaginal bleeding.

Menopause had been present for six years. There was then a recurrence of menses, with periodic bleeding. A dilatation and curettage, and insertion of radium, was done by another surgeon. A diagnosis of cystic hyperplasia of the endometrium was made. Following radiation the uterine bleeding was controlled for several months, then there was a recurrence of uterine bleeding which continued periodically over a period of three years when the patient first came under my observation. Fatigability and nervousness were associated symptoms.

Examination revealed an abdominal mass arising from the pelvis to the level of the umbilicus. This mass was freely movable, slightly lobulated and firm but with several cystic areas.

External genitalia normal; outlet marital; vaginal walls soft and velvety with a cyanotic tinge. The vaginal mucosa appeared to be that of a young menstruating woman rather than the atrophic mucosa of senility. Cervix was smooth and there was a bloody discharge from the cervical os. There was a mass palpated on abdominal examination which filled the entire left side of the true pelvis. Uterus could not be distinguished from the mass.

The preoperative diagnosis was granulosa cell tumor, left ovary.

Diagnostic curettage was done and there was no evidence of malignancy but a large amount of hyperplastic endometrium.

A laparotomy was next performed. Left ovary was found to be replaced by a tumor about 25 cm. in diameter. Surface was smooth with solid and cystic areas throughout. Both tube and ovary were removed and a supravaginal hysterectomy performed. Postoperative course was uneventful. Deep x-ray therapy instituted.

Pathologic report (Dr. Roy R. Kracke) stated: "Gross specimen consists of a uterus with one attached tube and ovary, and a large ovarian cyst. The uterus is smaller than normal. Its peritoneal surface shows several projecting fibrous tumors, the largest of which is about 2.5 cm. One of these has undergone complete calcification. These tumors are well circumscribed and composed of smooth muscle and fibrous tissue. The

uterine cavity appears to have undergone recent curettage in a few areas and there is a slightly shaggy endometrium remaining. The tube is normal in size but shows a marked degree of congestion. The ovary is slightly decreased in size and shows considerable fibrosis. The cyst has been opened and its content emptied. In the collapsed state it measures about 20 cm. across. Attached to its surface is the other tube. The wall of the cyst is rather thick and there are incorporated in it many smaller cyst cavities. On the inner surface of the larger cavity there project numerous masses of a friable fleshy type of tissue which has a slightly papillary appearance. There has apparently been considerable hemorrhage inside of the large cavity.

"Microscopic sections of the scrapings show a large number of endometrial glands that vary markedly in size with most of them being quite large and cystic. They are separated by a loose, edematous stroma of fibroblastic tissue. Section of the ovary proper shows much fibrous tissue replacement containing numerous cyst spaces filled with mucoid material. Section of the friable projecting tissue from the inner side of the cyst shows it to consist of a solid type of tissue comprised of closely packed, dark staining round cells with very little cytoplasm that tend to arrange themselves in radial fashion around clear spaces. This is typically a granulosa cell tumor. Section of the uterine tumor shows the characteristic structure of leiomyomata. Section of the tube shows marked thickening with fibrosis with a tendency toward obliteration.

"Diagnosis: granulosa cell carcinoma of the ovary. Multiple uterine leiomyomata. Chronic fibrotic salpingitis. Swiss cheese type of hyperplasia of the endometrium. Ovarian fibrosis."

Case 3. A married white female, aged 54, para 8, whose chief complaint was vaginal bleeding.

For the past nine years the patient had been having vaginal bleeding, scanty to profuse. No abdominal pain. Two months ago uterine bleeding became profuse and for the past two weeks became progressively worse. Patient had been very nervous. Breasts congested and very tender for the past five years. Before onset of present illness periods were regular.

On examination the breasts were hypertrophied, tender with no palpable masses. Abdomen distended by a soft mass arising from the pelvis to just below the umbilicus.

On pelvic examination the external genitalia were normal. Vaginal mucous membrane was soft and velvety and not of senile type. Uterus was enlarged, symmetrical and retroverted. Mass was about 15 cm. in diameter, freely movable, soft, cystic in areas, palpable in the posterior fornix and filled the left side of the pelvis.

A laparotomy was performed. A supravaginal hysterectomy, bilateral salpingo-oophorectomy and dilatation and curettage were done.

Pathologic report (Dr. Francis Parker): Hyperplastic endometrium, granulosa cell tumor of the ovary, fibrosis uteri.

Three years later patient is well; no evidence of recurrence.

Case 4. A married white female, aged 66, para 5, was admitted to hospital with chief complaint of vaginal bleeding.

Menopause fifteen years ago with mild symptoms. At the age of 58 patient had periodic vaginal bleeding and spotting. Five years ago patient had dilatation and curettage with application of radium by another surgeon. This stopped bleeding for about four months, then bleeding recurred and continued periodically. Eight years ago perineorrhaphy and anterior colporrhaphy were done. One year ago, while still bleeding, right nephrectomy was done, the reason for which was not known and she remained in hospital five months after operation. Bleeding continued and became continuous and more profuse. For the past three years patient has had material breast tenderness and fullness, and for the past two years had become progressively weaker and nervous.

On examination the breasts were large, pendulous, and tender with no palpable masses.

The abdomen was distended, and everywhere tympanitic with no masses palpable.

The external genitalia were negative. Outlet not relaxed; uterus normal size; ovaries palpable, not enlarged; no fixation; no other pelvic masses palpable.

On dilatation and curettage only a small amount of endometrium was obtained, not pathologic. Laparotomy was done. Exploration of pelvis revealed the uterus normal in size and position. Ovaries were sclerotic and small. Immediately adjacent to the ovaries in the broad ligaments were several small, firm, rounded masses about 0.5 cm. in diameter. Both ovaries showed areas of endometriosis. Uterus showed adenomyosis throughout, cystic and hyperplastic endometrium.

Pathologic report (Dr. Roy R. Kracke): Granulosa cell tumor in hilus of ovary.

Patient improved. Nervousness and weakness gradually subsided. One year later very greatly improved; no evidence of recurrence.

Case 5. A colored female, aged 8, had no special complaints. For several months her mother had noticed a brownish-colored vaginal discharge. This had not been periodic in character and not distinctly bloody. Mother also observed a swelling in the child's abdomen. On examination the child was well nourished and showed physical development beyond her age. The breasts were very large and resembled those of a girl at puberty. There was a heavy growth of hair over her pubic area and in axillas.

Abdominal examination revealed a firm, smooth globular mass which filled the lower abdomen to the level of the umbilicus.

At operation a solid tumor of the left ovary, approximately 16 cm. in diameter, was found. The left tube and ovary were removed. The right tube and ovary were normal. The uterus showed distinct hypertrophy.

Pathologic report: Granulosa cell tumor of the ovary; sarcomatoid type.

Treatment

The treatment of granulosa cell tumors of the ovary is based upon the individual case. It is well established that surgery offers the best results. In two of the cases reported radium had been used without im-

provement in symptoms. Radiation, while very destructive of the normal follicular system, does not have the same effect on neoplastic granulosa cells. In the younger group conservative measures should be employed unless the tumor shows definite evidence of malignancy. Cases have been reported of pregnancy occurring after removal of granulosa cell tumor involving one ovary. Case 1 showed resumption of the normal menstrual cycle following conservative surgery. In the adult group the condition of the patient and the pathologic combination found should dictate the course. As a rule removal of the tumor with complete hysterectomy offers the best results. The use of postoperative radiation should depend upon the condition found and the presence or absence of malignant changes. These tumors have a low incidence of malignancy (17 per cent) and do not show a high grade of malignancy. Surgery offers a good prognosis in the majority of cases.

COMMENT

Although hormone determinations were not made on the cases reported, it is generally accepted that granulosa cell tumors elaborate estrogen in varying amounts. The cases reported, therefore, give us an opportunity of observing the endocrine effects of these hormones. Case 5 which showed precocious development with menstruation at the age of 8 is additional proof of the now well recognized feminizing role of estrin. This case also showed that uterine bleeding may result from the stimulus of the endometrium by the estrogens without ovulation or the formation of corpora lutea.

In cases 3 and 4 there were varying degrees of menometrorrhagia associated with endometrial hyperplasia — a clinical picture similar to that so often encountered in patients with ovarian dysfunction and thought due to an excess of estrogen. The extreme nervous symptoms of these two patients suggests the syndrome of so-called premenstrual tension. This would seem to substantiate the theory that the symptoms of premenstrual tension are due to a high estrogen blood level.

The menstrual history of case 1 is of particular interest. This patient had a four-year period of amenorrhea. Removal of the granulosa cell tumor in this patient resulted in menstruation six days after the operation and therefore a normal twenty-eight day menstrual cycle. What was the endocrine mechanism to account for this patient's amenorrhea and what was the cause of the sudden onset of menses after removal of the tumor? The correct answer to these questions would be of material help in the interpretation and treatment of that frequently seen group of patients with irregular menses; periods of amenorrhea and menometrorrhagia.

Corner and others have shown by animal experimentation that uterine bleeding occurs following estrin deprivation. The sudden onset of menstruation in this patient (case 1) could be explained on this basis; the withdrawal of estrogen caused by the removal of the tumor.

Karnaky has recently advanced a less complicated theory to explain menstruation. He suggests that uterine bleeding may occur from any type of endometrium; that bleeding depends on what he calls the menstruating level of the blood estrogens. If above or below a certain level the patient will have amenorrhea. If maintained at a constant level there will be prolonged and continued bleeding, menometrorrhagia.

The menstrual behavior of this group of reported cases could well be explained on the basis of this theory — the quantity of estrogen elaborated by the tumor causing a varying blood level of these hormones.

Luteinization of granulosa cell tumors as reported by Traut, Greenblatt and others must be kept in mind in considering the endocrine effects of these tumors. If partial or complete luteinization takes place, progesterone enters into the endocrine picture and may play an important role in effecting the estrogen blood levels.

There still remains to be explained the exact mechanism by which a drop in the estrogen level causes the vascular changes in the endometrium which results in uterine bleeding. We believe the solution of this unknown factor will be found in some hormone elaborated by the endometrial glands. It is difficult to believe that the elaborate glandular development of the endometrium is for the sole purpose of forming ovum.

OPERATIVE MANAGEMENT OF CHRONIC GASTRIC AND DUODENAL ULCER

Lon Grove, M.D.
Atlanta

"The progress of our knowledge of lesions of the stomach and duodenum has been to a large extent due to the visualization of such lesions by the surgeon. From this experience a better understanding of the symptoms associated with both benign and malignant lesions in their various stages has been made possible and has given a clearer concept of the indications for medical and surgical management and, above all, the results of such management." (Balfour).[1]

It has been approximately fifteen years since Finsterer first advocated, in this country, radical gastric resection as the treatment of choice for intractable ulcer of the stomach and duodenum. With few exceptions, the acceptance of this radical teaching has been gradual in this country. Prior to 1930, in the Lahey Clinic, 70 per cent of chronic ulcers of the stomach and duodenum were treated by conservative operative measures, while only 30 per cent were subjected to radical resections. Since 1935 these percentages have been reversed, and during the last year, of those operated on, 74 per cent had resections, while 26 per cent were treated by more conservative operations. This has been equally true of the Mayo Clinic. (In 1939) McClure[2] said "partial gastrectomy is the operation of choice for intractable duodenal ulcers. This opinion is shared by all surgeons who have had an extensive personal experience with the procedure and it is encouraging to find the greatest number of enthusiasts are included among those surgeons who have had the most experience." Roscoe Graham[3] states that "a subtotal gastric resection, with removal of the entire gastric antrum, does not carry with it any handicap either physiological or symptomatic and secures the patient from subsequent ulceration, to a degree which has not been experienced by other operative procedures, carried out for the lesions which now demand a subtotal gastrectomy." And in his experience, no patient has developed anemia that was not readily controlled by an adequate diet with iron therapy.

Prior to 1938 I had done one radical resection for chronic duodenal ulcer, but during the last two years I have only done one conservative operation for chronic gastric or duodenal ulcer. This changing attitude does not mean that gastroenterostomy, or even pyloroplasty, should never be done but it does mean that gastroenterostomy should only be done for definite indications, namely, in the patient past middle life, with a low acidity, showing a high grade obstruction, due to scar; where the possibility of malignancy is not seriously considered; and always in the poor risk patient. The old saying "two operations and a living patient are better than one operation and a funeral," could apply to read, a conservative gastroenterostomy to be followed by a gastrojejunal ulcer is preferable to a gastric resection and the death of the patient. For those who advocate gastric resections it must be admitted that this procedure does not wholly solve the ulcer problem. It is too complicated for that and surgeons of experience continue to seek an ideal in the management of peptic ulcer that will bring about permanent control of the disease in the simplest possible way, and through a more physiologic approach. As an example, Wangensteen[4] recently described a modification of the principle advocated by Connell, namely, the removal of the acid-bearing portion of the stomach by fundusectomy.

As is true of gastroenterostomy, a subtotal gastrectomy is sometimes followed by a gastrojejunal ulcer, but in a much smaller per cent of cases. A fair estimate would probably be 2 to 3 per cent as against 10 to 20 per cent following gastroenterostomy. This is equally true of other complications. Roscoe Graham[3] has recently reviewed 62 cases, following gastroenterostomy, and found that 14 or 22.5 per cent showed evidence of gastrojejunal ulcer. He also reported three reactivated duodenal ulcers, and two malfunctioning stomas. I have had

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three patients with recurrent massive hemorrhage, one following gastroenterostomy and two following pyloroplasty. All were operated on primarily for duodenal ulcer. Graham[3] also states that some of his patients, showing clinical improvement following gastroenterostomy, were found, by x-ray examination, to have poorly functioning stomas and he questioned the part that the gastroenterostomy played in their improvement. He thinks that these figures should not be used to condemn gastroenterostomy when indicated, but more to criticize the surgeon for using gastroenterostomy when it is not indicated.

The indications for operations must be definite and, today, in the majority of instances, should have the full approval of the internist or gastroenterologist. With two exceptions, all of my patients have been referred by an internist or gastroenterologist, after thorough medical treatment. The indications for surgery have been: ulcer with two or more recurrent massive hemorrhages, six cases; ulcer with one massive hemorrhage in one patient who was forty-seven years of age; ulcer with penetration into pancreas, two cases; ulcer with recurrent obstruction with hyperacidity, four cases; ulcer with recurrent perforation, one case; ulcer with nonfunctioning stoma following gastroenterostomy, one case; recurring cholangitis following choledochoduodenostomy done for external biliary fistula, which resulted from injury to the common duct, at time of cholecystectomy, which was done elsewhere, one case.

The indications for subtotal gastrectomy are five: first, duodenal ulcer with recurrent massive hemorrhages; second, ulcers of the stomach in which there is any doubt of the possibility of malignancy or when the ulcer does not respond promptly to medical treatment; third, when there is x-ray evidence suggestive of a penetrating ulcer into the pancreas; fourth, duodenal or pyloric obstruction in the young, or even in the patient past forty, when associated with a high acidity; and fifth, complications following more conservative operations.

With the possible exception of gastric ulcer, indication for surgery is more to control the complications of ulcer than for the ulcer itself. The small uncomplicated duodenal ulcer will usually respond to proper medical treatment and should be left to the care of the internist. The patient who seeks surgical treatment because of his unwillingness to cooperate in his medical management, will prove a discredit to surgery, and this is not an indication or justification for surgical interference. It was in this type of case that the various forms of pyloroplasty were so frequently used, in former times, and frequently resulted in a painful experience to the patient and a discredit to surgery.

Recurrent massive hemorrhage is probably the most serious complication of chronic gastric or duodenal ulcer and if it is recurring rapidly in an individual of advanced years, the mortality may be as high as 50 per cent. The management of these cases has and is still giving rise to considerable discussion, but the weight of evidence seems to favor conservative treatment during the active phase of hemorrhage, except in the patient over fifty years of age when the hemorrhages are recurring rapidly. Lahey has urged that if operative interference is to be instituted it should be undertaken within the first 24 to 48 hours. He has shown that if surgery is unduly delayed and then undertaken, the mortality will be prohibitive. This has likewise been the experience of others. It is because of this mortality that patients in the older age group should not be allowed to have repeated hemorrhages, and resection is indicated following the first hemorrhage, as soon as a definite diagnosis can be made. In the younger age group the mortality is much less with medical management — Graham[3] thinks not more than 2 to 7 per cent—and a more conservative attitude may be taken. However, even in this group more than two or three massive hemorrhages seems ample justification for radical surgery. Various conservative operations have been advocated for control of hemorrhage, but anything short of resection of the ulcer or direct ligation of the bleeding vessel will prove disappointing in a large percentage of cases. Gastroenterostomy is not indicated in the management of this

complication, with the possible exception of the gastric ulcer situated on the lesser curvature, and then only when it is supplemented by excision of the ulcer.

When we consider the difficulties of making an accurate diagnosis between gastric ulcer and an early malignancy of the stomach, the question is raised, should every ulcer of the stomach be considered sufficient justification for surgery. I am sure many of us have had the experience of exploring the stomach with the preoperative diagnosis of gastric ulcer to find it malignant, and vice versa. Gray[6] of the Mayo Clinic has recently stated that he is seeing with increasing frequency malignancy associated with ulcer, and often when the ulcer appears by x-ray to be healing satisfactorily. The incidence of malignancy developing in gastric ulcer has been variously estimated from 10 to 20 per cent, but as Walters[7] points out, "the practical point is, that there are certain ulcerating lesions which stimulate either or both, roentgenographically and frequently on gastroscopic." I believe there is a reasonable viewpoint that all ulcers of the stomach should be removed, not only because of the symptoms which they may produce but because of the fact that malignant degeneration may be present or may take place. This seems to be a radical attitude, but is it too radical in view of the low mortality that should accompany resection when done by those with experience and when contrasted with the high death rate from gastric cancer? As a compromise it has been the practice in most clinics to judge these cases on the basis of trial and error. The patients with known gastric defects, as shown by x-ray, are first diagnosed and treated as ulcer and if they do not show sufficient or prompt healing, as determined by x-ray, they are then placed in the category of suspicious lesions and surgery is advised. But isn't this placing too much burden of proof on the roentgenologist? Can we be sure by x-ray, even in experienced hands or even with the use of the gastroscope, when we are dealing with a large infiltrating ulcer or a malignancy? Some men of wide experience are beginning to think we cannot. In a recent review of approximately 10,000 cases of cancer of the stomach, studied at the Mayo Clinic over a number of years, it was shown that 81 per cent gave a history of having received treatment for ulcer at some previous time, and with some degree of improvement. Surely most of us have had the experience of operating on patients who gave a similar history. I have had two such cases this year. When we recall how difficult it is at times for us to be certain whether a lesion is inflammatory or malignant, even when we have it in our hands and can see it, we cannot be too exacting or depend too much on the x-ray or the gastroscope. With x-ray we can probably discover the lesion of the stomach in approximately 95 per cent of cases, but beyond this the burden of proof becomes very heavy and the diagnosis uncertain. If we are to reduce the mortality from cancer of the stomach in Georgia, we must not wait until we can be too cocksure of the exact lesion we are dealing with, but will explore more frequently when we have demonstrated a filling defect of the stomach.

When an ulcer is penetrating into the pancreas it is rarely relieved by medical measures, because of involvement of the peritoneum. It will frequently invade the pancreatico duodenal artery or one of its branches, resulting in massive hemorrhage, therefore any form of indirect operation is inadequate and will be accompanied by a high percentage of failure. Such operation can have no effect on the local peritonitis surrounding the penetrating ulcers; it does not control hyperperistalsis, which accompanies active ulcer; and it does not permanently decrease the free hydrochloric acid content of the stomach. For these reasons, except in the poor risk patient, a subtotal gastrectomy is the operation of choice.

While gastroenterostomy is the operation of choice for permanent pyloric or duodenal obstruction due to scar, particularly in the patient past forty with a low acidity and a dilated stomach, there is a wide chance for error in the selection of cases for this procedure. In those cases where obstruction is due to ulceration, with edema, which results in temporary suppression of

gastric secretion, the results following gastroenterostomy, particularly in the young patient, will be disappointing. After the obstruction is relieved and the edema in the wall of the stomach has subsided, the acid secretion is frequently reestablished, with a hyperacidity. Before deciding on the operation these patients should have a week or ten days of careful medical supervision, in bed, with repeated lavage, or an indwelling duodenal tube to determine if the obstruction is due to edema and if it is relieved. If the obstruction is relieved but recurs and surgery is thought to be indicated, a subtotal gastrectomy is the operation of choice. Lahey has pointed out that it is unwise and an unnecessary expense to persist in medical treatment in the cases showing recurrent obstruction. He has found that they frequently respond to bed rest and gastric lavage, only to obstruct again as soon as they resume their normal activities and diet.

Complications following the more conservative operative procedures are manifested by recurrent hemorrhage, due to a marginal ulcer or reactivation of the original ulcer, or to a non-functioning stoma. These can be permanently relieved only by a radical subtotal gastrectomy. I have had one case following gastroenterostomy, done elsewhere for duodenal ulcer, in which it was necessary to disconnect the stoma and do a radical resection. When a subtotal gastrectomy is done for a gastrojejunal ulcer, or following pyloroplasty, it is much more difficult than it is when done primarily, and the mortality will be higher in this group.

Confronted with such radical procedure the patient is entitled to expect: first, a reasonable mortality, which should not exceed 3 to 5 per cent. Marshall[5] (1939) of the Lahey Clinic reported one death in their last 88 cases. I have since been told that they have done well over 100 with the one death. In the same year McClure[2] reported a mortality of 5 per cent during the last five years, with one death in the last fifty-three consecutive cases. Walters and Gray[6] of the Mayo Clinic reported an equally satisfactory mortality. In my series of 16 cases there has been one death. This occurred in a man seventy-four years of age, twenty-one days after operation, the result of pneumonia. Second, the patient should have reasonable assurance of permanent relief from symptoms; and third, assurance that he will be able to continue his normal activities without undue handicap.

In order to make these assurances good surgery must attempt to accomplish three things: first, removal of the ulcer; second, relief of stasis, with a reduction in the emptying time of the stomach; and third, permanent reduction in acidity. These can only be accomplished by a radical gastric resection. Wagensteen,[4] experimenting with the various forms of operations for chronic gastric and duodenal ulcer in the human, was unable to produce a permanent anacidity, except by radical gastric resection. This he attributed to two factors acting together: first, marked reduction in the acid secreting glands in the stomach; and second, increased alkalization brought about by free regurgitation of the alkaline jejunal contents into the stomach. He was not able to bring about a permanent anacidity in a single case following gastroenterostomy.

Various technics have been devised and used for gastric resection. All have been some modification of the Billroth I or II. Because of certain obvious mechanical difficulties, the Billroth I has not been extensively used in this country; it has been more extensively used in some of the European clinics. While I have done both the Polya and Hofmeister modification of the Billroth II, either anticolic or postcolic, I have preferred the Hofmeister. I think it offers some added points of safety and the stoma can be limited to a reasonable size, which results in a more nearly normal emptying time of the stomach; and it offers all of the advantages offered by the Polya technic. We have routinely removed 2/3 to 3/4 of the stomach and, with only two exceptions, the pylorus. It has been repeatedly shown by those most experienced that anything less radical will not produce the best results. We are in agreement that the ulcer should be excised whenever pos-

sible without too much added risk, but with the large infiltrating edematous ulcer of the duodenum or with the small infiltrating ulcer low on the posterior wall; this may not be possible without too much risk of injury to the common duct. It is in this type of case that the pyloric exclusion operation, advocated by Finsterer, done in connection with a radical subtotal gastrectomy appears indicated. It has been thought by some that the incidence of gastrojejunal ulcer was higher when the pylorus was not removed, but this view is not held by some men of wide experience, namely, Maingot, Finsterer and others. I have used this technic in two cases with no complications to date. As a substitute for the exclusion operation, Bancroft has suggested dividing the stomach approximately two inches proximal to the pyloric sphincter and then removing from the distal segment all the mucous membrane. This removes any pyloric hormone that might later predispose to a gastrojejunal ulcer.

With one exception all of my cases have been followed by gastric analysis and x-ray study of the stoma, and the findings have been routinely satisfactory. To date every patient has shown a well functioning stoma with no free hydrochloric acid and a combined acidity of 12 per cent or less. While sufficient time has not elapsed there has been no evidence of gastrojejunal ulcer or recurrence of hemorrhage to date. The factors influencing these results are: first, proper selection of cases for resection; second, adequate preoperative treatment; third, careful technic to insure a well functioning stoma; fourth, careful and prolonged postoperative supervision; fifth, elimination of associated intra-abdominal disease, which should rarely be done at the time of gastric resection, as it has been repeatedly shown that the mortality from gastric resection is definitely higher when additional intra-abdominal procedures are instituted; and sixth, experience in management of gastric and duodenal lesions. There is probably no operation that calls for more meticulous or painstaking technic, or a more careful selection of the anesthetic, which should be in competent hands.

REFERENCES

1. Balfour, Donald C.: Surgical Principles in Disease of the Stomach and Duodenum, Frank Howard Lahey, Birthday Volume, p. 45, 1940.
2. McClure, Roy D., and Fallis, Lawrence: Partial Gastrectomy, Transactions of the Southern Surgical Association, 111:71-86, 1939.
3. Graham, Roscoe R.: Subtotal Gastrectomy, Frank Howard Lahey, Birthday Volume, p. 206.
4. Wagensteen, Owen H., et al.: Gastric Acidity Before and After Operative Procedure with Special Reference to the Role of the Pylorus and Antrum, Ann. Surg. 112:626-670, 1940.
5. Marshall, Samuel F.: Subtotal Gastrectomy for Chronic Ulcer of the Stomach and Duodenum, Frank Howard Lahey, Birthday Volume, p. 315.
6. Walters Waltman; Gray, H. K., and Priestley, J. T.: Malignant Lesions of the Stomach, Results of Treatment from 1907 Through 1938. (Preliminary Report), Proc. Staff Meet. Mayo Clin. No. 40, 15:630 (Oct. 2) 1940.
7. Walters, Waltman: Malignant Gastric Lesions Simulating Benign Lesions, Proc. Staff Meet. Mayo Clinc, No. 40, 15:638 (Oct. 2) 1940.

DISCUSSION ON PAPER OF DR. LON GROVE

Dr. O. H. Weaver (Macon): In treating ulcers of the stomach and duodenum there must be exercised careful judgment to conserve the best interests of the patient. Which of the theories suggested as their cause may be correct, or whether any one or none of them is, if we knew the etiology we might be able to prevent, and no doubt treat them more successfully. Disregarding the old saw "that the time for surgical interference is after the ulcer has heen permanently cured several times," it is true that a majority of acute and a lesser numher of chronic ulcers heal by non-surgical treatment.

In the intractably chronic, bleeding or obstructive lesions, other than surgical measures are ineffective. What is the best surgical method to employ in these cases should be determined hy the surgeon after the lesion with its complications are carefully examined at operation. No set operation will best meet all conditions. Dr. Grove's contentions are in accord with those of the majority of surgeons whose experience entitles them to speak with authority. I think he is correct in not going so far as some who claim that "the indications for surgery in duodenal ulcers are no longer a matter of debate, and that gastroenterostomy excision and pyloroplasty should give way to wide gastric resection." I feel that there is a definite indication and permanent relief to he gotten in certain ulcer cases by less radical measure than subtotal resection. Others will require resection as set forth by Dr. Grove. In chronic ulcers of the stomach there is more justification for subtotal resection than in those of the duodenum. This is on account of the fact that stomach ulcers are often malignant, if not primarily they may become so, without definite evidence to always differentiate; whereas, in duodenal ulcers the reverse is the rule. This applies more particularly in patients developing symptoms after middle life.

Unfortunately, these operations for gastric resections, are not all performed by men skilled in gastric surgery, so the results must be much less satisfactory when operated on hy those of less experience, who only attempt such surgery occasionally. As Dr. Grove says, "No operation calls for more meticulous or painstaking care." The foregoing comment may be made of any

surgical operation and does not detract from the operation per se, but I am not sure but that this is to be considered in the choice of procedure, depending upon the qualifications of the operator. Many of these patients may be operated on by surgeons capable of the less major procedure and, under such circumstances, I wonder if the best interest of these patients with duodenal ulcer is not better conserved by not subjecting them to subtotal resection, even granting that the less radical operation carries less assurance of permanent relief.

I have enjoyed Dr. Grove's excellent paper, and congratulate him on the splendid results that he has obtained.

Dr. Lester Harbin (Rome): During the past few years the shortcomings of pyloroplastics and gastroenterostomies have been realized. A more physiologic and rational approach to the problem of the surgical treatment of gastric and duodenal ulcers has resulted in the more frequent use of subtotal gastrectomy. Although not the ideal treatment, since it does not remove all the cause of this disease, it is the best we have to offer those patients with ulcers which require surgical care.

Dr. Grove has presented this subject in a very comprehensive manner and he is to be congratulated upon his excellent results and low mortality. I am sorry he did not have sufficient time to finish his paper because he was unable to discuss the number of cases which he has had and also his low mortality rate.

The Hofmeister modification of Billroth II using an anti-colic loop of jejunum as suggested by Lahey is simpler to execute and the end results have been good in my small series of two cases. I think this operation will eventually replace post-colic anastomosis because it functions just as well and does not require a rent in the meso-colon which is sometimes difficult to close especially when a high resection is done. A further advantage is that in case a secondary operation becomes necessary, this type of anastomosis is easier to expose. An enteroenterostomy is not only unnecessary but is undesirable since such an anastomosis would divert the alkaline contents of the jejunum downward and it is very desirable for this fluid to pass through the stomach to neutralize its acidity.

The pre and postoperative care is so important that I would like to ask a few questions about this phase of the subject. Since the type of anesthetic is also important, I would like for Dr. Grove to give his opinion as to which form of anesthesia is best. Is whole blood used routinely following all subtotal resections and do you always insert a Levine tube and apply suction to keep the stomach empty and to relieve the tension on the suture line postoperatively?

Dr. Joseph Akerman (Augusta): I am very much interested in this paper for several reasons—first on account of the author and second, on account of the fact that a good many of the cases I was familiar with.

I think a few things ought to bear evaluation. The late Dr. Williams used to say, "Red birds for supper is no occasion for forceps." The same applies to labor. We should look upon it from the standpoint of the patient and not the convenience of the obstetrician. A great many people think obstetrics can be scheduled. It is very rarely scheduled.

It seems to me the thing narrows down almost to the relative merits and demerits of three methods of procedure. They differ in minor occasions. The first is whether or not we shall use, if we decide induction is necessary, the medical induction or rupture the membranes or use Voorhees' bags or other mechanical means.

It always seemed to me, and I haven't been convinced otherwise yet, that the introduction of catheters simulates normal labor more than any other method. It interferes less with the position of the child, with the possibility and probability of prolapse of cord and starts the uterus, so to speak, into more normal labor than does the displacement by bags or even rupture of the membranes. I have not yet been convinced otherwise. I am open to conviction still. I believe the cervix is dilated more satisfactorily and smoothly and with less injury when dilated with the membranes unruptured.

I wish to commend Dr. Gatewood for this work. I wish to commend him generally. When he was vice-resident and resident on our service, we found him a very efficient and faithful worker.

I'd like to offer one friendly criticism. There is no such word in Latin as fet*i*. It is a noun of the fourth declension and the plural is fet*us*, not fet*i*.

Dr. Schley Gatewood: In closing I want to thank Dr. Akerman and Dr. Phillips for their discussion in the absence of those who were scheduled to discuss this paper.

I'd like to add that induction of labor is something that we put off as long as possible, but when the time comes toxemia and eclampsia should be kept under control by supplementing the medicinal remedies with mechanical induction of labor.

Dr. Lon Grove (Atlanta): I appreciate this discussion. I am sorry I could not read the entire text, but it was too long.

I shall show some slides to illustrate further points contained in the paper.

In answering Dr. Hardin's two questions, we use gas-ether anesthesia because we think it is safe and we are not well set up for continuous spinal anesthesia. We hope to be soon. We do use the indwelling duodenal tube and believe it gives added safety. In the first few cases, we left the tube in for three or four days, but with more experience, we are now able to remove it at the end of 24 hours, and so far have had no difficulty.

We have operated upon seventeen patients in the last eighteen months, with one death. With one exception, they have been found to have well functioning stomas.

The Eighth Institute on the Exceptional Child met on May 26 under the auspices of the Child Research Clinic of The Woods Schools, Langhorne, Pa., for the purpose of discussing "The Wartime Adjustment of the Exceptional Child." Topics to be discussed will include "Social Adjustment During Early Childhood and Its Failures," "Educational Philosophy for the School for Exceptional Children," "Educational Practice," "Social Adjustment," "Vocational Training for the Exceptional Child During the War Emergency," "Military Service," and "The Impact of War on the Family."

THE INDUCTION OF LABOR BY BOUGIES

T. Schley Gatewood, M.D.
Americus
Richard Torpin, M.D.
Augusta

In reviewing the records of the University Hospital for the past twenty years, 292 cases of catheter insertion for the induction of labor have been analyzed.

To a woman[1] goes the credit of having first therapeutically induced labor. In 1738 Mary Donnelly of England ruptured the membranes of a patient with a contracted pelvis in order to produce premature labor. It was not until 1855 that Krause reported the insertion of bougies. This procedure has been followed by many modifications. Rectal tubes and stomach tubes, Voorhees' bags and animal bladders, and odd shaped pessaries have not been passed by. With the rapid advancement of physiologic chemistry in conjunction with physiology and pharmacology, varying assortments of medicines, singularly, collectively, and in partnership with the endocrines, have been used. The vitamins are yet to be tried.

Most of the present-day reports are returning to that simple procedure first reported used by the Englishwoman in 1738, of rupturing the membranes, supplemented by the oxytocic drugs, castor oil and quinine, and the oxytocic endocrine, pitocin. Slemons[2] reported 132 patients to whom he gave two ounces of castor oil and ten grains of quinine, followed by rupturing of the membranes and, in four hours, the nasal administration of pituitrin. There were no maternal deaths and only one fetal death. The length of labor varied from two to eight hours in primiparas and multiparas. He had no prolapsed cords and the maternal morbidity did not differ from the usual. Stern[3] modified this procedure slightly and had 100 per cent success in 85 cases, 33 primiparas and 52 multiparas. His routine consisted of giving two ounces of castor oil and ten grains of quinine on admission. Two hours later a hot soap suds enema was given, and one to two hours later the membranes were ruptured. Following the rupture of the membranes a pledget of cotton saturated with an ampule of pituitrin was inserted into one nostril. Should tetanic contractures of the uterus develop it was withdrawn at once; otherwise it was allowed to remain for half an hour. At the end of an hour, if labor had not started, a similar pledget was inserted into the other nostril. His latent period was short: for primiparas eight and one-half hours, for multiparas, six hours. The maternal morbidity was 9.4 per cent; the fetal mortality was 3.5 per cent. Other obstetricians have reported larger series. Mathieu and Holman[4] had 98 per cent success in 750 patients to whom they gave castor oil, a hot enema, pituitary extract, minims 3 every half hour and, after three to four injections, artificial rupture of the membranes if necessary. The maternal morbidity was 7.07 per cent and the maternal mortality was 0.13 per cent (one case). The fetal mortality was, uncorrected, 4 per cent; corrected 0.8 per cent. One probably wonders what is the danger of rupturing the membranes in order to induce or aid the induction of labor. Schultze[5] studied 604 cases of dry labor, occurring in a series of 6,500 cases, and found the length of labor was shorter than the average for the patients with intact membranes, the first stage being chiefly affected. The chief danger or contraindication to rupturing membranes is an unengaged head, thus allowing the cord to prolapse or the possibility of a malpresentation, e.g., a hand or a shoulder. Eastman[6] stressed this point and reported 303 cases so induced with a fetal mortality under 2 per cent. His average duration of labor in primiparas was 10.9 hours, and in multiparas 6.7 hours. However, Plass and Seibert[7] in a review of 681 records where membranes were ruptured with disregard to presentation or position of presenting parts, had five prolapsed cords and one prolapsed arm, an occurrence of 1 per cent. There were nine stillbirths (1.62 per cent) and ten neonatal deaths (1.47 per cent). They believe it safer than bougies.

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bags, or packing. Spodeman[8], after reviewing 1000 consecutive normal cases, studying the effects of artificial and spontaneous rupture of the membranes after onset of labor, first and second stages, also including 59 cases of induction of labor by rupturing the membranes, concluded that rupture of the membranes had no appreciable effect on lengthening labor, increasing maternal morbidity or fetal mortality, the same being equally true in the 59 artificially induced cases. Wilson[9] reported something unusual he encountered while rupturing the membranes for induction of labor: From a small group of 26 cases he had two cardiacs who developed marked pulmonary edema immediately after rupture of the membranes, one patient dying. The Committee[10] on the Induction of Labor at the May, 1939, meeting of the Central Association of Obstetricians and Gynecologists, reporting on questionnaires from 125 anonymous replies that included 13,891 deliveries of which 1,669 had been attempted inducements with 91 per cent success, stated that if the cervix was effected and if the vertex was presenting, labor was more likely induced—prolapse of the cord occurs three times more often in induced labor than in spontaneous labor—and the majority believed that the induction shortened labor. The most popular method was a combination of oxytocic drugs, pituitrin, and rupture of the membranes, the efficacy being estimated at 97.5 per cent in a total of 649 cases. Only twelve bougie insertions were reported, their efficiency rating being 86 per cent.

Rectal tubes and stomach tubes have been used but have been discarded for bougies which carry less danger in regard to perforating the uterus. O'Brien[11] has used the pear pessaries.

Bags

Waters[12] had a series of 372 cases of induction with the Voorhees' bag. His incidence of success was high—96.3 per cent. However, his operative incidence was high —48.4 per cent, but this might be blamed on the type of cases induced, there being 60 cases of placenta previae and 32 cases of abruption placentae. After insertion of the bag, labor contractures were initiated within one hour in 55 per cent of the cases, and the average length of labor for all cases was 10.4 hours. The fetal deaths corrected was 7.8 per cent. There were 29 prolapsed cords, which gives a rather high percentage of 8 per cent; and there were seven prolapsed arms. The maternal mortality was 2.4 per cent.

Bags are usually preferred for certain very definite indications, mainly placenta previae and abruptio placentae, though after labor has commenced other indications enter. Morton[13] had a series of 49 cases with an efficiency of 93.8 per cent, three patients failing to go into labor. It happened that these three patients had previously had bougies inserted without results. The efficiency in mature cases (95.8 per cent) was much greater than in immature cases (85.7 per cent). The corrected fetal mortality was 18.7 per cent, there being included eight prolapsed cords with six resultant stillborns. The maternal morbidity was 37.7 per cent and the maternal mortality was 2.1 per cent. He concluded that when the membranes were ruptured the morbidity rose. His incidence of breech presentation with bags was 15.2 per cent (with bougies, 2.3 per cent).

Endocrines

Lubin and Waltman[14] used estrin alone in 36 cases, before term, at term, and past term in an attempt to induce labor. Eight cases were thought to have been induced, pains having commenced within 48 hours of the last injection. Dosage varied from 10,000 to 350,000 i.u., but the onset of labor bore no relation to the dosage of estrin used. It was thought possible that labor was shortened in some primiparas. After successfully producing abortion with estrin in rodents, Robinson, Datnow, and Jeffcoate[15] used estrin in 36 pregnant women. There were four groups: (1) Twelve abortions attempted with no success; (2) ten cases of premature labor attempted and five went into labor; (3) induction was tried in two abnormal pregnancies and both went into labor and delivered and (4) induction was tried in twelve cases of intrauterine death of the fetus including missed abortion. Ten were induced. Thus they strongly recommended estrin as

being the absent factor in missed abortion and advocate its supplement. But for the induction of labor they consider estrin alone inferior to other present day methods, and for abortions they consider it a failure.

Bougies

In 1919 Foulkrod[16] reported inducing labor in 23 cases with catheters, but expressed the belief that rupturing of the membranes was simpler, surer, and safer. Peel[17] reported 100 cases of induced labor. Ninety case were by bougies, nine by rupturing the membranes, and one by uterine insertion of a stomach tube. Total uterine inertia was outstanding, being 46.6 per cent. His forcep rate was 23.3 per cent, the usual forcep rate of the hospital being 8.7 per cent. The stillbirth rate for the total series of induced cases was 14 per cent, but in primigravidas alone it was 20.8 per cent. There was one maternal death, a primigravida, after being in labor seventy hours was delivered by forceps of a stillborn. Postpartum hemorrhage necessitated manual removal of the placenta, and sepsis developed. Robinson[18] reported an injury to the placenta following catheter insertion. Apparently the placenta was attached very low, a large gush of arterial blood returning. The catheter was immediately withdrawn, the membranes were ruptured, and the cervix and vagina packed. The patient went into shock, but recovered and had a normal delivery and puerperium. The placenta was almost severed, showing the track of the bougie. On several occasions we have seen blood return through the catheter. Immediate withdrawal followed by reinsertion of the catheter is routine. Occasionally, the catheter has to be reinserted twice. From the groove in the placenta, it is apparent that Robinson was using a much stiffer catheter than necessary. Morton[13] had a series of 160 bougie insertions for induction of labor. They covered all periods of pregnancy after the twentieth week. The efficiency in mature cases was 88.2 per cent. The fetal mortality, uncorrected, was 18.1 per cent and corrected, was 4 per cent. There were six prolapsed cords, three occurring from 19 cases where the membranes were accidentally or intentionally ruptured. The maternal morbidity was 18.6 per cent and the mortality 1.3 per cent. The two maternal deaths resulted one from a gas bacillus endometritis and one from a ruptured uterus with terminal peritonitis. Eastman[6] has since had 103 cases of catheter insertion, using it principally in post-maturity cases and toxemias. Reddock[19] induced 50 cases with bougies, reporting a maternal morbidity of 32 per cent with no maternal deaths. The fetal mortality was 4 per cent corrected. His longest catheter latent period was 72 hours and the shortest latent period was thirty minutes.

Presentation of Cases of the University Hospital

A series of 292 cases of catheter insertion occurring at the University Hospital, Augusta, during the past twenty years have been reviewed. There were 242 white cases and 50 colored cases. There were 140 known primiparas and 117 known multiparas. Cases cover all periods of pregnancy from the second month until past term, the largest group 130 being full-term. The indications were numerous and varied, the most common indication being toxemia—148 cases.

Indications

Toxemia	148
Eclampsia	59
Convenience	15
Pyelitis	12
Small Pelvis	12
Possibly Overdue	6
None	6
Hydramnios	5
Nephritis	4
Large Baby	4
Irregular pains for 2-3 days	4
Miscellaneous	17

(Vaginal bleeding at five months—2; thyroid disease—2; history of two transverse positions with stillborns, third transverse position turned and catheters inserted—1; therapeutic abortion—1; dead fetus with vaginal bleeding—1; heart disease—1; asthma, pyelitis, and toxemia—1; acidosis from nausea and vomiting—1; pernicious nausea and vomiting with dead fetus—1; funnel pelvis—1; uncomfortable due to rectocele and cystocele—1; pressure pain—1.)

The method of catheter insertion was simple. After preparing the vagina with antiseptic solution direct vision was obtained by a speculum and usually (203 cases) two number 34 French catheters were inserted with uterine dressing forceps, the ends being pushed into the cervical canal out of sight. One or two sterile vaginal packs were then placed against the cervix to insure against the catheters sliding out. The catheters were usually left in place 24 hours then removed.

The operative incidence was 15 per cent: low-forceps occurring fourteen times; mid-forceps occurring twenty

times: high-forceps occurring two times; podalic version occurring five times; and other operative deliveries occurring three times, one being a forceps and version with twins, one being a breech extraction, and the other being a manual dilatation with high forceps, it having also been a catheter failure case.

The uncorrected fetal mortality was 16 per cent (47 cases), but when we exclude the deaths of fifteen premature infants ranging from six months down; eleven infants with eclamptic mothers; three macerated fetuses from eclamptic mothers; six previously diagnosed dead fetuses, and one infant with spina bifida, the corrected fetal mortality drops to 3.7 per cent (eleven cases). It is interesting to note that of these eleven fetal deaths two had prolapsed cords; one died at eight months with hydrops amnii; one death occurred in a case of acute nephritis, the mother later having two more stillborns. Two fetal deaths were in pre-eclamptics, one being full-term and the other only eight months pregnant. One death was in a seven-month premature infant, and the remaining four fetal deaths were associated with difficult operative deliveries:

One podalic version for unengaged head, the baby having a harelip and living only a short while; one breech extraction; one manual dilatation of the cervix and high forceps extraction with the baby dying soon thereafter and one midforceps in a pre-eclampsia patient. Certainly this can not be considered a high fetal mortality, especially when the conditions are taken into consideration.

Beside the above mentioned two prolapsed cords, there was another case making a total of three prolapsed cords in the entire series.

The maternal morbidity was 20 per cent (59 cases). The morbidity was unexplainable in only 6.8 per cent, i.e., in 20 cases. Of the remaining 39 explainable morbidity cases, 19 were apparently due to pyuria, and the remaining 20 cases were due to various causes ranging from bronchitis to malaria.

The uncorrected maternal mortality was 3.7 per cent, there being eleven deaths. However, in seven deaths the insertion of catheters played no part in the fatal outcome—two patients having died from heart disease and five from eclampsia. It seemed that back in 1920 the routine admission treatment was to insert catheters into moribund eclamptic patients, followed by hot packs externally to promote diaphoresis. But there were four deaths (1.3 per cent) in which catheters did figure. One death resulted from a perforated uterus with peritonitis. Another death occurred 53 hours after the catheters had been removed; in her last twelve hours she had three chills; the catheters had been left in place the usual 24 hours. In the third case the catheters had been removed after 23 hours. Labor lasted 32 hours and a stillborn was delivered. Three hours and twenty-three minutes after delivery the mother died with temperature 103° F. The cause of death given was toxemia. The fourth mortality occurred in an eclamptic who had had five convulsions and died on her first postpartum day with high fever. The catheters had remained in place 24 hours, then 18 hours later, her pains being less, a vaginal pack was inserted. In six hours her temperature was 101.8° F. and at death on the first postpartum day it was 106° F. Thus in these four deaths there were only two deaths directly due to the catheters.

There were fourteen failures and there were three cases where the patient died shortly after the introduction of the catheters before labor had had a fair chance to commence. Thus the success in the series of 292 cases was 95.1 per cent. Of these fourteen failures, one began bleeding thirty minutes after the catheter insertion; removal of the catheters and rupturing of the membranes controlled the bleeding instantly and a normal labor followed. In another failure case, on removal of the catheter it seemed only half-way inside the uterus, just one catheter having been employed. Another failure was a seven-month premature primipara in whom the catheters were left 72 hours with no pains or dilatation of the cervix; the membranes were ruptured and 61 hours later a stillborn was delivered. One patient, a primipara, 36 years old, full-term required 156 hours for onset of labor, the catheter insertion being followed by rupture of the membranes, and then medical induction; the fetus died during the first stage of labor. Two failures preceded maternal deaths; one dying of eclampsia after delivering a weak baby that later died; the other mother died from acute nephritis with toxemia after she had failed to go into labor from the catheter insertion. The other eight failures went into labor and had normal deliveries after the catheters were withdrawn and the membranes were ruptured.

Failures

Case	Month of Pregnancy	Para
1	9	0
2	9	0
3	9	0
4	9	0
5	9	0
6	9	0
7	8	0
8	8	0
9	8	0
10	7	0
11	8½	2
12	8½	3
13	8	4
14	8	?

Further review shows that of these fourteen failures ten were primiparas of whom six were at term. The remaining four failures were multiparas and none was at term. Thus we found that all multiparas at term went into labor successfully, but that 60 per cent of the primiparas failing to go into labor were at term.

Catheters were employed in cases from two months to term but the most premature case to fail was seven months pregnant, in whom the catheters had been left for 72 hours.

Sometimes after labor was begun, occasion was found to supplement labor hy other procedures. The membranes were ruptured in 28 cases; pituitrin, in small doses, plus castor oil and quinine were used in 24

cases; and a combination of these two methods was used in 12 cases.

While introducing the catheters, the membranes were accidentally ruptured in three cases.

The average onset of labor in 122 cases of primiparas was 10.6 hours, as compared to 9.5 hours in 102 multiparas. The average duration of labor in 123 cases of primiparas was 20.8 hours, as compared to 13.0 hours in 102 multiparas. In 140 primiparas the average total hours was 30.7, and for 117 multiparas, 22.5 hours.

Average	*Onset*	*Labor*	*Total*
Primipara	10.6 hours	20.8 hours	30.7 hours
Multipara	9.5 hours	13.0 hours	22.5 hours

Our average time for the onset of labor is about three hours longer than that reported by Morton[13]; and the average duration of labor about two to three hours greater than he reported in his cases. The fetal and maternal mortality rates were almost identical. However, our percentage of successful inductions was higher.

It is interesting to note that once in a critically ill patient endocrine induction was tried twice, medical induction, i.e., castor oil, quinine, and pituitrin, was tried, and finally an unsuccessful attempt to rupture the membranes was made. As a last resort, catheters were easily inserted and in five and a half hours the patient delivered.

SUMMARY

Two hundred and ninety-two cases of catheter insertion have been reviewed. The percentage of success was 95.1 per cent. The corrected maternal mortality was 1.3 per cent; the corrected maternal morbidity was 6.8 per cent. The corrected fetal mortality was 3.7 per cent. The average onset of labor in primiparas was 10.6 hours, and in multiparas, 9.5 hours. The average length of labor in primiparas was 20.8 hours; in multiparas, 13.0 hours.

CONCLUSIONS

1. Catheters inserted into the uterine cavity will produce labor in a high percentage of cases.

2. It is a fairly safe method when the proper catheters are used and the usual operative antisepsis observed.

3. Sometimes it is the easiest method.

4. Induction of labor by catheter insertion is not so safe as induction by rupture of the membranes and is not any more effective.

REFERENCES

1. Reis, R. A.: Comparative Study Based on 500 Consecutive Cases of Induced Labor, Am. J. Obst. & Gynec. 17:392-400 (March) 1929.
2. Slemons, J. M.: Induction of Labor at Term, Am. J. Obst. & Gynec. 23:494-501 (April) 1932.
3. Stern, S. M.: Routine Induction of Labor at Term, Am. J. Obst. & Gynec. 27:701-704 (May) 1934.
4. Mathieu, A., and Holman, A.: The Results of Induction of Labor in 750 Cases from Private Practice, Am. J. Obst. & Gynec. 33:268-280 (Feb.) 1937.
5. Schultze, M.: Am. J. Obst. & Gynec. 17:20, 1929.
6. Eastman, N. J.: The Induction of Labor, S. Clin. North America 16:1337-1362 (Oct.) 1936.
7. Plass, F. D., and Seibert, C. W.: Premature Rupture of Membranes as a Means of Inducing Labor, Am. J. Obst. & Gynec. 32:785-793 (Nov.) 1936.
8. Spodeman, L. C.: The Role of the Amniotic Sac in Labor, Am. J. Obst. & Gynec. 31:645-649 (April) 1936.
9. Wilson, L.: Induction of Labor by Rupture of Membranes, Am. J. Obst. & Gynec. 27:265-269 (Feb.) 1934.
10. Central Association of Obstetricians and Gynecologists: Report of Committee on Induction of Labor, Am. J. Obst. & Gynec. 37:873-877 (May) 1939.
11. O'Brien, M. C.: Induction of Labor by Pear Pessary, South. M. J. 28:1143-1145 (Dec.) 1935.
12. Waters, E. G.: The Dilating Bag in Obstetrics; It's Use, Abuse, and Hazards, Am. J. Obst. & Gynec. 36:639-647 (Oct.) 1938.
13. Morton, D. G.: A Comparison of the Results Obtained in the Induction of Labor by Means of Bougie or Bag, Am. J. of Obst. 18:849-859 (Dec.) 1929.
14. Lubin, S., and Waltman, R.: Results of Attempted Induction of Labor with Estrin, Surg., Gynec. & Obst. 69:155-158 (Aug.) 1939.
15. Robinson, A. L.: Datnow, M. M., and Jeffcoate, T. N. A.: Induction of Abortion and Labor by Means of Estrin, Brit. M. J. 1:749-753 (April 13) 1935.
16. Foulkrod, C.: Induction of Labor by Use of Bougies, Am. J. Obst. & Gynec. 79:550 (April) 1919.
17. Peel, J. H.: A Critical Analysis of 100 Consecutive Cases of Surgical Induction of Labor for Real or Suspected Disproportion, Lancet 1:935-937 (April 25) 1936.
18. Robinson, J. H.: Injury to Placenta During Krause's Method of Induction, Lancet 1:653 (March 26) 1927.
19. Reddock, J. W.: Induction of Labor by Rupture of the Membranes Without Quinine: A Comparison of Several Methods, South. M. J. 29:289-297 (March) 1936.

DISCUSSION ON PAPER OF DRS. T. SCHLEY GATEWOOD AND RICHARD TORPIN

Dr. Joseph Akerman (Augusta): I am very much interested in this paper for several reasons—first on account of the author and second, on account of the fact that a good many of the cases I was familiar with.

I think a few things ought to bear evaluation. The late Dr. Williams used to say, "Red birds for supper is no occasion for forceps." The same applies to labor. We should look upon it from the standpoint of the patient and not the convenience of the obstetrician. A great many people think obstetrics can be scheduled. It is very rarely scheduled. It seems to me this thing narrows down almost to the relative merits and demerits of three methods of procedure. They differ in minor respects. The first is whether or not we shall use, if we decide induction is necessary, the medical induction or whether we shall rupture the membranes and use Voorhees' bags or other mechanical means.

It seemed to me, and I haven't been convinced otherwise yet, that the introduction of catheters simulates normal labor more than any other method. It interferes less with the position of the child, with the possibility and probability of prolapse of cord and starts the uterus, so to speak, into more normal labor than does the displacement by bags or even rupture of the membranes. I have not been convinced otherwise yet. I am open to conviction still. I believe the cervix is dilated more satisfactorily and smoothly and with less injury when dilated with the membranes unruptured.

I wish to commend Dr. Gatewood for this work. I wish to commend him generally. When he was assistant resident and resident on our service, we found him a very efficient and faithful worker.

I'd like to offer one friendly criticism. There is no such word in Latin as fet*i*. It is a noun of the fourth declension and the plural is fet*us*, not fet*i*.

Dr. W. P. Phillips (LaGrange): I am very interested in this paper due to the fact that I have recently reviewed about one hundred fifty cases of obstetrics at the City-County Hospital in the city of LaGrange. In reviewing these cases of induction of labor one of the most impressive facts was the safety of the procedure. I think an individual should decide on one of the many procedures to induce labor and become familiar with it. In these cases done at our hospital the majority were induced by introducing one or more large catheters which were held in place with packing of plain sterile gauze.

Of course, we all agree that the artificial rupture of the membranes is the most sure way for speedy induction.

Dr. Gatewood: I'd like to say that induction of labor is something that we all put off as long as possible but when the time comes toxic uremia and eclampsia should be kept under control.

DIABETES MELLITUS IN THE NEGRO

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This presentation represents accumulated data obtained from the diabetic clinic of Grady Hospital colored division, during a period of twelve years.

Diabetes mellitus is a disease characterized by the inability of certain individuals to properly metabolize carbohydrates, with resulting hyperglycemia, glycosuria and in many instances acetonuria. The number of diabetics being referred to the clinic would give the impression that the disease is on the increase, but the most logical conception is that physicians, with the aid of modern laboratory equipment, are more alert in recognizing the condition. When making a general examination, existing complications must not be overlooked because of the low resistance of diabetics. In many instances the diabetic condition is minor as compared to more serious maladies for which the patient is seeking medical aid. In any case, the diabetes must be controlled in the usual manner to accomplish satisfactory end results.

Physiology, Etiology and Pathology

The physiology of the diabetic differs from the normal in that he is unable to store glycogen in the liver, muscles and skin. The sugars obtained from the food in the form of dextrose, accumulate in the blood above the normal threshold of 160 to 180 milligrams per 100 cc. and the overplus is excreted by the kidneys. The normal threshold varies in different individuals, some having a much higher than others. In diabetics the threshold may reach 250 milligrams per 100 cc. of blood — nature's method of building a defense mechanism. When there is insufficient carbohydrate utilization to burn the fats, acetonuria will result. The normal mechanism to combat hypoglycemia, which often occurs in too strenuous dieting, exercise and insulin therapy is the splanchnic nerves stimulate the adrenals, which throw out epinephrine; this in turn stimulates the liver to liberate stored glycogen to cover the deficiency. In severe diabetes there is a depletion of glycogen and this mechanism fails, which explains why epinephrine administered fails to affect these cases who go into insulin shock.

The etiology is more closely linked with heredity, overeating, especially of fats; obesity, sedentary habits, infections and endocrine disorders such as the pituitary and thyroid. All contributing factors may only be the means of precipitating the condition in those who have an inherited background. The pathologic change is either a hyalin, fibrous or hydropic degeneration of the islands of Langherhan located in the pancreas, the cells of which govern the carbohydrate metabolizing secretion of this gland. The degree of dysfunction is determined by clinical and laboratory findings.

Classification

For a working basis diabetics are classified into *mild* (chart 1). These are found by urinalysis after a heavy carbohydrate meal; many are found by insurance examiners. The finding of glycosuria is followed up with a sugar tolerance test to differentiate the true diabetic from the renal (low threshold) and the alimentary (fast absorption) glycosurias. *Moderate* (chart 2) like the mild, comprises a rather small percentage, the fasting blood sugar ranges from 125 to 200 milligrams, with intermittent glycosuria and, in most instances, the

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From the outpatient department of Emory University School of Medicine.

patient is symptom free. *Moderately severe* (chart 3) have all the subjective and objective findings, with fasting blood sugar from 200 to 350 milligrams, persistent glycosuria, and may or may not have acetonuria. These make up the larger number attending the clinic. *Severe* (chart 4) are usually brought into the hospital in coma, with blood sugars of 300 to 500 milligrams and up; the percentage of sugar and acetone in the urine is high. They are treated, stabilized and referred to the out-patient department when dismissed. This classification is flexible and overlapping. It is not unusual for a diabetic to change from one group to another, although many, with proper treatment and cooperation, will remain in about the same status throughout the period of observation.

Treatment

The first duty of the physician is to impress diabetics with the gravity and longevity of their respective conditions. Teach them as much as possible about the disease, with emphasis on the care of cuts, bruises and sores, however minor they may be, not to trim the nails too closely or pull hangnails and to use disinfectants freely until medical aid is available. The treatment is diet, plus insulin, with no substitutes. For the past three years a high carbohydrate, low fat diet has been used: carbohydrates 250, protein 83 and fat 72 grams, yielding approximately 2,000 calories. The advantages of this diet are: it satisfies the patient, there is less tendency to acidosis and arteriosclerosis, there is sufficient carbohydrate to facilitate the storage of glycogen and it stimulates the pancreas to produce more insulin. All patients are placed on the same diet except a few cases of marked obesity, who are given a reducing diet. The mild and the moderate groups get along nicely and remain sugar free on the diet alone. Observations are made on these patients at one to three month intervals. The moderately severe are placed on the diet, and protamine zinc insulin, the dose depending on the blood sugar and severity of symptoms. They are observed at weekly intervals, the insulin gradually increased until glycosuria is controlled; thereafter the time interval is extended from four to eight weeks. In many cases two doses of insulin a day is more desirable, given before the morning and evening meals; some tolerate the crystal zinc insulin better than the protamine zinc insulin. The activity of the crystal zinc insulin is ten to twelve hours while the protamine zinc insulin activity may extend over a period of eighteen, twenty-four or thirty hours. The customary time of giving insulin has always been one-half hour before breakfast when only one dose is given, but experience has taught that some individuals get along better if the dose is taken before the evening meal, especially if they are apt to have reactions during the early morning hours. Often the change in time, with no change in dosage, will control such reactions. Some patients do better by giving protamine zinc and crystal zinc insulins at the same time. This combination is always given before breakfast. The rational is that the protamine zinc insulin gives prolonged activity, while the crystal zinc insulin takes care of the three-meal period. This group, when stabilized, will store glycogen approaching the normal and will remain comparatively sugar free.

The severe diabetics are the ones that give more concern. They are liabilities at all times. They are unable to store very little, if any, glycogen until they have been under treatment for a long time and then to a limited degree. Their blood sugar range is very unstable and it is a battle of wits to keep this class out of coma on one hand, and insulin shock on the other extreme. It is better therapy to allow this group a margin of safety and let them carry a moderate glycosuria, rather than too strenuous control. Some of these patients tolerate protamine zinc insulin, one or two doses daily, but the majority tolerate the crystal zinc insulin much better when given in two doses daily. With the latter, hypoglycemia is much more easily controlled by taking of extra food, orange juice, etc. These patients are observed at one, two, three and four week intervals. The insulin dosage may be large at the beginning of treatment but has to be decreased in many cases as improvement takes place. When insulin therapy is begun, the new patients are sent to the emergency clinic where the nurse

gives the daily dose until the patients are taught to administer insulin to themselves. It is surprising how well the latter is done with seldom an infection due to improper sterilization of instruments.

In regard to exercise, all diabetics are encouraged to continue their usual occupations although those in the severe group have to be rather careful and seek less strenuous work. As a rule, an idle diabetic is harder to control than those who lead a normal existence.

CHART 1—MILD DIABETIC

Fasting B.S. 117.2 mg.	Urine Neg.
100 Gm. dextrose given.	
30 Min. B.S. 176.2 mg.	Urine Neg.
1 hr. B.S. 222.2 mg.	Urine 3+
2 h. B.S. 210 mg.	Urine 4+
3 hr. B.S. 166.6 mg.	Urine 3+

Sugar tolerance test, Byrd's Micro-Folin-Wu Method. This patient had 1+ sugar in urine after eating candy 24 hours before urinalysis.

CHART 2—MODERATE DIABETICS

		Before Treatment				*After Treatment*	
No.	Age	Wt.	B.S.	Ur.	Ins.	B.S.	Ur.
1	66	130	222	3+	0	167	0
2	62	202	222	2+	0	174	0
3	78	123	285	4+	0		0
4	57	157	145	2+	0		0
5	54	135	222	2+	0	208	0
6	66	130	222	4+	0		0
7	45	188	118	0	0		0
8	53	180		3+	0	102	0
9	45	188		3+	0	119	0
10	36	166	230	3+	0	105	0

CHART 3—MODERATELY SEVERE DIABETICS

			Before Treatment			*After Treatment*	
No.	*Age*	*Wt.*	*B.S.*	Ur.	Ins.	B.S.	Ur.
1	52	214	222 mg.	4+	U-20 P.Z.I.		0
2	34	156	285 mg.	4+	U-40 C.Z.I.		0
3	29	175	218 mg.	4+	U-45 P.Z.I.		Tr.
4	57	115	236 mg.	4+	U-60 P.Z.I.		1+
5	38	223	267 mg.	4+	U-30 P.Z.I.		0
6	73	211	250 mg.	4+	U-20 P.Z.I.	167 mg.	0
7	60	171	316 mg.	4+	U-20 C.Z.I. U-15		0
8	54	209	333 mg.	4+	U-40 P.Z.I.	105 mg.	0
9	42	218	280 mg.	4+	U-40 P.Z.I.		0
10	45	161	200 mg.	4+	U-40 U-30 P.Z.I.		0
11	53	128	400 mg.	4+	U-30 P.Z.I.		0
12	35	155	229 mg.	4+	U-50 P.Z.I.		0
13	48	160	333 mg.	4+	U-25 P.Z.I.		0
14	47	145	309 mg.	4+	U-45 P.Z.I.	89 mg.	0
15	70	156	200 mg.	4+	U-40 P.Z.I.		0

Conclusion

In dealing with this low income group of individuals, it is needless to say that economics are a big handicap. Many patients are on relief, W.P.A., etc., and it is impossible for these unfortunates to obtain the proper diet. Fortunately the City of Atlanta furnishes free insulin to those who are unable to pay and charges the rest of the patients according to their financial ability to pay. It is much cheaper to hand out a few bottles of insulin weekly than to have these patients sent into the hospital in coma.

478 Peachtree Street, N. E.

DISCUSSION ON PAPER OF DR. T. LUTHER BYRD

Dr. Thos. L. Ross, Jr. (Macon): We have only one diabetic paper on the program and I think we are indeed delighted that we have had such a discussion as Dr. Byrd has given us.

It has been our experience here in our general medical clinic, that diabetes in the Negro has not been nearly so prevalent as diabetes in the white person,

(Continued at bottom of next column)

CHART 4—SEVERE DIABETICS

		Before Treatment				After Treatment	
No.	Age	Wt.	B.S.	Ur.	Ins.	B.S.	Ur.
1	40	140	400 mg.	4 +	U-35 C.Z.I. U-10	200 mg.	2 +
2	34	120	400 mg.	4 +	U-60 P.Z.I.	105 mg.	3 +
3	61	190	500 mg.	4 +	U-60 P.Z.I.	200 mg.	0
4	24	106	500 mg.	4 +	U-30 C.Z.I. U-20	..	0
5	36	145	500 mg.	4 +	U-40 C.Z.I. U-40 P.Z.I.	A.M. 117 mg.	0
6	29	268	250 mg.	4 +	U-30 C.Z.I. U-60 P.Z.I.	A.M.	0
7	10	107	500 mg.	4 + 4 +	U-70 P.Z.I. U-40 P.Z.I.	167 mg. 143 mg.	0 4 +
8	13	75	450 mg.		U-40		
9	28	125	380 mg.	4 +	U-40 P.Z.I. U-40	150 mg.	3 +
10	16	145	400 mg.	4 +	U-80 P.Z.I.	110 mg.	0

CHART 5—GLUCOSE TOLERANCE TEST
NORMAL INDIVIDUAL
BYRD'S MICRO-FOLIN-WU METHOD

Fasting	Blood Sugar 98.5 mg.	Urine Neg.	
100 Gm. dextrose given.			
30 min.	Blood Sugar 140.0 mg.	Urine Neg.	
1 hr.	Blood Sugar 160.0 mg.	Urine Neg.	
2 hr.	Blood Sugar 98.5 mg.	Urine Neg.	
3 hr.	Blood Sugar 84.0 mg.	Urine Neg.	
4 hr.	Blood Sugar 98.5 mg.	Urine Neg.	
5 hr.	Blood Sugar 100.0 mg.	Urine Neg.	
6 hr.	Blood Sugar 114.0 mg.	Urine Neg.	
7 hr.	Blood Sugar 106.0 mg.	Urine Neg.	
8 hr.	Blood Sugar 102.5 mg.	Urine Neg.	

This blood sugar curve shows very clearly the splanchnic stimulation of the adrenals which excreted sufficient epinephrine to act on the liver, which in turn liberated enough glycogen to raise the blood sugar to overcome an impending hypoglycemia, somewhere between the third and fourth hour.

DISCUSSION BY DR. TOM ROSS

(Continued from preceding page)

nor has it been as severe as in the white person. I think you might be interested in the work Dr. C. A. Mills of Cincinnati is doing, trying to show that diabetes in the Negro, who has been born and raised in the South and moved North, has increased in severity. He has shown that rather conclusively in his studies of the relation of disease to weather conditions in various parts of the country.

I think there are two points in Dr. Byrd's paper, aside from the technical part of it, worthy of emphasis and mention.

First, that he has gotten the city of Atlanta to give insulin to indigent diabetic patients. We have been trying for years to convince the city fathers that 50 cents a week for insulin can save a cost of over $2.00 per patient per day in the hospital. It appears that when people come into the hospital they are there for a long time. They could cut expenses markedly if they would give insulin to patients not able to buy it.

He is also to be commended on the use of very high carbohydrate diets in handling patients in the clinic. I think the treatment of diabetes is so closely tied up with the economic problem and nutritional problems in Georgia that he is certainly to be commended in getting high carbohydrate diets for they are the cheapest to use.

It has been our experience at the Macon Hospital that patients with complications are our chief concern. In the Negro particularly—and I think we had better confine ourselves to that—gangrene is one of the chief complications in old Negro women. Dr. McKittrick of Boston said something at the recent meeting of the American College of Physicians that might be interesting to you. He said if dorsalis pedis artery pulsation can be felt in the presence of gangrene of the toe, the patient has a 35 to 1 chance of having no major amputation, if the gangrenous toe is removed at once. If the dorsalis pedis cannot be palpated, the chances are 10 to 30 that the leg will have to be removed for gangrene. If we have a gangrenous toe, if the dorsalis pedis pulsation can be felt, just remove the toe and take the chance of 35-1 that you will not have to operate further. If not, the leg should be removed at once.

Infections is another point. It is very hard to get away with the use of sulfonamide derivatives in the presence of infections in diabetes. They have experienced many severe reactions, particularly with the use of sulfanilamide. They are using at the present time small doses of sulfathiazole.

Another interesting finding from the same clinic: many of the younger diabetics formerly fell prey to tuberculosis, not necessarily tuberculous deaths but incapacitation from tuberculosis. They are finding now that the young diabetics of fifteen or more years' duration, under optimum management, are becoming incapacitated by failing vision. Arteriosclerosis of the retina is producing blindness in diabetics of fifteen years' duration and over.

I'd like to bring up one point without any further discussion of it, just to mention it because it certainly

foreshadows many changes in our thinking. The John Phillips Award of the American College of Physicians was given to Dr. William C. Stadie of the Department of Research Medicine of the University of Pennsylvania for these two ideas, which he rather conclusively proved with his findings: "The diabetic utilizes ketone bodies in the peripheral tissues *without* insulin and seems to manufacture ketone bodies from fatty acids in the liver."

"The obligatory coupling hypothesis seems to be unfounded, that is, fats do not burn in the fire of the carbohydrates. A patient can utilize all fatty acids without any carbohydrate."

This clinic has grown considerably during the past twelve years; fifteen to thirty patients are seen weekly. I wish to thank Dean R. H. Oppenheimer for the assistance of a rotating senior intern and also Mrs. Florence Sawyer, a registered dietitian, for her splendid assistance in teaching dietetics to these patients, individually and in groups.

HUMAN VERSUS MATERIAL VALUES IN MEDICAL PRACTICE

C. W. ROBERTS, M.D.
Atlanta

After 150 years of living under the American form of Government, the people of the United States are now subjected to the severest test of our history. The democratic way of life, born through sacrifice, sweat and blood, has been accepted as a birthright, with uncomprehending regard for the price which our forebears paid to plant it on these verdant shores.

Certain fundamental ideals are written into our organic law — Justice and freedom for all; Freedom to worship; Freedom of speech and of press; Freedom to choose and follow an occupation and to prosper in accordance with the individual effort and initiative exercised. Indeed, these are more than ideals. They are fundamental rights, inherent in us and, therefore, undeniable in our life together.

There are political ideals, too. Freedom of franchise, freedom to take sides, freedom to criticize and priceless declarations of American foreign and domestic policy. Such slogans as "Speak softly and carry a big stick," the Monroe Doctrine, the Good Neighbor Policy are crystallized bits of American aspirations voiced by our leaders as expressions of the will of our people to build and protect a nation.

And, likewise, our profession has its ideals. Equal service to all without regard to economic status, the sanctity of the patient-physician relationship, the practice of medicine is a profession, not a trade, the obligation to walk with honor and to serve unobtrusively, to do justly and to love mercy.

Since Pearl Harbor all these slogans, fundamental, political, professional, have passed in review. As a nation and as individuals, we have been engaged in the chastening business of self-examination. We are swapping watch-words, hurling shibboleths, professing patriotic fervor. In unison we applaud this awakening spirit among us. Once again we are Americans all, Americans of the days of the pioneer when the plow, the axe, the hammer and the pen were instruments of courage and allies of the unsheathed sword.

But in candor and for our very safety, both in the present and for the future, must we not face the painful truth that in political, personal, and no less in professional circles our pleasing phrases and our new-found patriotism must be adjudged as yet little more than the revival of the overworked euphonies by which too long we have lulled ourselves into dangerous sleep.

As a result of the stocktaking which peril imposes, we will, if we are to sustain a truly democratic state, remove the dampers with which we have foolishly muted accusing consciences, and critically re-examine these catch-phrases of the past days of false realism, to the end that they may be sharpened, vitalized and practiced in the light of the lessons which current history unfolds.

It is with such a purpose that I wish to draw your attention to certain derelictions and questionable tendencies which have slowly insinuated themselves into the warp and woof of medicine, and beg you to consider with me how they may be resisted. Moreover it seems appropriate, to see how we have kept the faith, to appraise the principles upon which professional conduct is based, to re-examine the foundations upon which medicine's shining structure has been built, and to scrutinize the tendencies which are alien to our medical code, and destined to bring calamitous emphasis on the material at the expense of the human values involved. To perpetuate our delin-

quencies through fear of treading on delicate ground will be at the price of seeing the idealistic nature of medicine desecrated by insiduous disloyalty from within, the while its defenders stand hesitant out of a false sense of fidelity to the aesthetic code.

The So-Called Profit Motive

It has been said that the laborer is worthy of his hire. Certainly the hope for some compensating value in return for goods or services must continue to be reckoned a primary motivating force in human relations. In its essence such an exchange constitutes the only foundation upon which human beings are able to build a sound community life. In commercial circles this urge is spoken of as the profit motive and none will deny that it is necessary or that it is responsible, in its fullest connotation, for the phenomenal growth of the American nation. Through its exercise our country has grown rich in things that can be seen, measured and touched. For the bodily requirements and comforts which growth of its commercial system has provided, we have only highest praise. But the American way of life now faces a crisis in which more is needed for its sustenance than food and raiment or motor cars and easy chairs. We must quickly learn that this compelling human urge holds deeper meanings than are expressed through dollar exchange or titles to property. The more essential qualities of the so-called profit motive, though less susceptible of analysis and infinitely more difficult to apply are yet the very yardsticks by which greatness in nations and, no less, in individuals is finally to be measured. These humanitarian principles, notwithstanding their neglect because of major emphasis upon material values, have nevertheless continued to lead to right doing towards others, and to the subordination of self to the requirements of society as a whole.

Now the physician, in common with other members of the nation, must give thought to ways and means of approaching economic security. In fact, an absence of business practices and policies, along with the lack of frugal habits in medical circles, have already placed too many of our confreres on the borderline of public dependency. While none decry the need for improvement on the dollar side of the physician's ledger, it is necessary to remember that success in our profession has never been measured in terms of property values alone. The very nature of our calling imposes the obligation to give primacy to the human over the material qualities of life. This we must continue to do or break faith with those whose ideals and practices are epitomized in the Hippocratic Oath.

Criteria for Success in Medical Practice

To achieve a degree of success is the laudable ambition of craftsmen in all walks of life. In medical practice the measure of individual achievement will be outstanding or mediocre, depending on the standards employed in evaluation.

To one group success means the acquisition of wealth, another is satisfied with the dubious distinction which is seen to arise out of the display of personal publicity or dramatic exploits in the form of cures alleged to have been accomplished through the use of miraculous drugs or operations performed in the exercise of legerdemain. Still others would depend upon such values as are incident to the life of the club, where worth is often measured by the tinsel of showmanship. But there is a segment of society, and let us hope a growing one, amongst whom the display of such studied attempts to attract attention is recognized for what is is—an effort to substitute the trappings of commercial technic for the traditional hallmarks of dignity and unobtrusiveness that have always characterized the medicine of those who have preserved and adorned our profession.

It is true that the doctor must still live in a society beset with many of the foibles and mysticisms that have afflicted human life since the dawn of creation. It is likewise true that as a member of that society, he is subject to all the baneful influences that beset the mass, but at the same time qualified through the disciplines inherent in the professional education to employ for evaluation criteria which are of higher order than is to be expected in society as a whole.

Furthermore, the physician should, because of the advantages enjoyed by membership in this great profession, not only be above suspicion and unimpeachable in his private record, but subject, if faithless to his obligations, to a larger measure of censure than would apply to a member of a less favored group. It is the physician's fidelity to this preferential status and the responsibilities inseparable from it that make the patient safe when under the necessity of choosing a medical attendant. But this democratic process — the right of the patient to free selection — is itself modified due to the presence in the population of varying abilities to choose. Except where there is failure to utilize prudent discrimination, the well-informed group is able to employ a physician whose motivating force squares with scientific honesty and human ethics. Such exceptions can be charged off as the retribution which is exacted for carelessness in all of life's activities and need give us little concern. There is, however, a much larger group which, because of educational handicaps, deserves our sympathetic attention. Left to their own devices they are helpless to separate the wheat from the chaff. Taking advantage of their credulities, the charlatan drives home his preposterous claims. It is under such circumstances that fair dealing and high quality medical care will be guaranteed, if at all, through the restraints imposed by the moral code to which the physician chosen happens to subscribe, and the abridgments he reads into the license that a trusting public places in his hands. And, like metals, the material out of which physicians are fashioned may be crude or fine.

Fine Art as Applied to Medicine

Now Ruskin has referred to fine art as that in which the head, the hand and the heart go together. In this connection, I have always been intrigued by the story told in Saint Luke's Gospel, of the young attorney who inquired of the Master what he should do to inherit eternal life. The answer came in the form of a parable, that of the Good Samaritan, with which you are all familiar.

This incomparable story was undoubtedly intended to draw a contrast between characters. Two ignored the distress of a fellow traveler. Another, moved by a compassionate heart, promptly turned from the pursuit of a personal mission to give of himself and his substance in behalf of another. Two saw a man with a wound, just another unfortunate man who was down on his luck. The other saw deeper than the wound into the living organism of a human being whose needs were both physical and spiritual. The difference lay in an innate ability to appreciate values.

But it is not to point to this enduring quality of concern for the less fortunate that I refer to the old story. The hero in this human drama is known to history not by any Christian name, but simply as a certain man of Samaria. The emphasis, as you would observe, is not on the individual but seeks to portray the type of man who cared so little about a name that history does not even record it. It is this stripping of a celebrated figure in sacred history of everything, even a name, in order to focus attention upon an act that excites our adoration. The name of this benefactor is lost in the limbo of unimportant detail in order that we may see without distraction the quality of the man as he related his life to the needs of those among whom he moved. And when I have looked about me to see his prototype, the purest examples have often been found in the medical profession.

I am thinking, as you are, of the family doctor whose virtues are sung in the prose and poetry of every land. Like the Good Samaritan his name may not adorn the pages of scientific journals, nor be recorded in Who's Who. He is rarely the president of a bank or the owner of the town's most elegant house. Occasionally he may be found where the townspeople meet for social or recreational pastime, but more often he is preoccupied with the unrelenting duties of the day. Disciplined only by unswerving allegiance to the obligations of the physician, his days, and often his nights, are spent with one thought uppermost — that none who seek his counsel will be denied. In all history of human relations, there are no more striking examples of self-negation, or unconditional devotion to

duty than is witnessed in the life of the family doctor. Nor is his type confined to the small town or country. Wherever the genuine sons of medicine go, in the open spaces or on crowded boulevards, will be found the beloved kind of physician whose primary concern will continue to be not with things but with people, counting it enough of life's glory if he can earn the plaudits of his fellows through unyielding devotion to medicine's virtues.

Decisions out of the Secret Places

If I dwell somewhat at length on that faculty which has to do with the moral nature, the urge which springs from deep recesses of the heart and strives to correlate action with the ethical code of one's calling, I hope you will not charge me with giving vent to the vagaries of senescence. Rather, I am trying to present a viewpoint which I believe is rather generally accepted albeit there exists a tendency nowadays to deny it free expression. Elegant living, as I conceive it, springs from critical self-examination within the cloisters of the heart, seeking to discover in this human sanctuary the urge which initiates action. It is here the choice is made, momentous decisions consummated. It is here, within the sacred precincts of the inner man removed from the persuasion of the mass, unfettered by the expediencies of popular practices that the dross of unsavory promptings is burned away in the fires of high idealism. Moreover, it is in these secret places that real worth is assayed, courses of action charted, faults discovered and self-serving devices discarded. Only when one has become acquainted with self at the source, is stripped of the habiliments of pretense and make-believe, and has been purged of selfish aims is he prepared to go about his task. It is said that when the late William J. Mayo decided to build an impressive cut-stone residence, the task of laying out the building was turned over completely to Mrs. Mayo and the architect, with one single exception. Remembering a small attic room in the home of his mother, where, on occasions they sat together and looked into the heavens, Dr. Mayo insisted that such a room, which he spoke of as "the tower," be built atop his new residence. Here was provided a hide-out to which he could retire from the guests and distractions downstairs. To this sparsely furnished room, containing only a few books and a large, flat-top desk, the master surgeon frequently went to be alone, to make his plans and to dream his dreams.

Old Wine in New Bottles

When one seeks to discover the quality in the life of the pioneer which most assuredly accounts for our priceless institutions, including our system of medicine, which collectively we speak of as the American way of life, it will be found under the designation of so-called rugged individualism. This spirit of dependence upon self to achieve mastery over the stern environment of colonial days, while born of necessity, was nevertheless the flowering of an irrepressible will to build, regardless of personal sacrifice, a nation of free men in which the inalienable rights of all could be established. If it be true that America has grown soft because it has lost this indispensable element, our hope for its recapture again lies in the great reservoir of self reliant Americans who dwell in the villages and on the farms where reverence for the simple virtues of life is still practiced. From this reservoir a refreshing stream has ever flown into polluted lakes of metropolitan life, carrying standards that have challenged the tendency to substitute an order of society predominantly motivated by commercial values. In this connection, I am thinking of the neighborhood environment of my childhood, where homely virtues seemed to abound without affectation. These sons of the soil believed in faith, but they also kept their powder dry. Their meeting houses rang with hymns of joy while their tithes were brought with hands roughened by honest toil. On Sunday they offered up their petitions, but Monday's rising sun found them about their duties in the fields.

In manhood's estate I may question some of the practices which their strict orthodoxy imposed, and looking back realize that the horizon of their physical world was set hard by the neighboring hills, but not their

love for humanity. Notwithstanding primitive rituals and circumscribed theaters of action, they were in their own right noble exemplars of the art of triumphant living.

From the vantage-point of the October of life, and concerned as you are with means for the preservation of medicine's all inclusive values, it is perhaps enough to hope that we may possess a spirit of service which in its zeal for balance, and for freedom from selfish design, will not suffer in comparison to that which they exemplified. Given the advantages of technical training, persons of their type will give us doctors who know how to link the learning of the laboratory to the life of the patient, bringing cure to men in the shadow of physical and mental sickness, and caution to those in radiant health.

The modern physician has been brought up in, if not indoctrinated by, an age of mechanistic philosophy. His technical training exceeds that of any previous era. Opportunities for graduate education are unlimited. The field of his endeavor has expanded to include the realm of mental maladjustment, and of perverted physiology. It is now known that man is more than bones and joints, more than muscles and nerves. Health flows from the totality of the organism, and is modified by the instincts, emotions, mind, experiences, reactions, defenses, memories, scars, triumphs and failures. It is the "en masse" of the individual that gets sick or that must be kept well.

Seeking this enlarged realm of therapy the public now turns to the physician, already heavily burdened with responsibility, for delivery of an essential public service. If he is to meet the challenge and continue to merit the high praise which his former labors have vouchsafed to him, he must recognize the necessity of giving more than issues from the cold facts of medical science. Quickened by the human touch, the physician will be ordered not by technic alone, but as well by the gentle art of human helpfulness, in which is blended the fruits of hand and head and heart. These three separate but interdependent, and the greatest of these is the compassionate heart.

The Physician's Technical Training

It is true that more than mere goodness of heart is necessary. Hands trained in the intracacies of technic and judgment seasoned by experience are the instruments with which the compassionate heart does its work. But these instruments alone are like two-edged swords, and need to be controlled and directed by unswerving loyalty.

Who among us has not marveled at the utter resignment exhibited by the patient referred for surgical care. Seeing the surgeon for the first time and with naught but the endorsement of the referring physician to bolster confidence, the patient enters the operating room with childlike reliance upon the skill and spirit of fair play of the physician. Danger is but little considered, few if any questions are asked and if, perchance, there be vague forebodings that difficulties are likely to be encountered or strange and unusual conditions met, the patient still clings in full confidence to the belief that the surgeon, endowed by some magic power, is prepared to surmount all obstacles. Who more than the surgeon knows under such circumstances how heavy is the burden of responsibility and with what care and circumspection he must approach his task? It is here that he must call upon a stout heart, a steady hand, a trained mind, and approach perhaps closer to the sacred precincts of life itself than is required of any other calling.

But what of the physician who looks upon his work as a kind of glorified avocation? It is thought not to be in good taste when questions of professional qualifications or ethical standards are brought under discussion. If not in forums such as this, where will they be considered? For centuries the medical profession has marched forward because our confreres of yester-year dared to raise the issue of inadequacy. It is through wholesome criticism and self discipline that we have progressed—through daily living according to the principles of medical ethics, that our profession has retained its right to be listed as a distinctive profession.

Young men now being admitted to practice are better trained than those of us who graduated a generation ago. In this very fact, however, lies an element of danger

unless the tendency to early specialization in surgery can be curbed. Surgery is more than cutting, more than technical execution. Hospitals have been so standardized that a given procedure may be performed without immediate ill effects, but all patients who go out the front door are not testimonials to either successful operations or to well applied surgical judgment.

Hospitals and medical schools are scrutinized with concern, but only public opinion, and that but weakly, stays the hand of the unseasoned surgeon. While the young doctor of today is better trained, and has the advantage of one or more years of intern or residency service, I believe the time is at hand when the public is entitled to some plan whereby surgeons are limited to the performance of only such procedures as they have proven their ability to undertake. The American College of Surgeons and the American Medical Association have made noteworthy contributions along the line of standardization. Certification of men in different specialties has begun. Such programs sponsored by the profession itself should be further extended. The guilty among us will feel the increasing pressure of enlightened public opinion. The quality of medical care, and not the unbridled ambition of the physician must be our increasing concern. Undue delay in the correction of this growing evil can only invite an attempt at solution by legal decree — a method doomed to failure before the fact, because morals can never be gained by statutory action. Medicine of the future will be refined, if at all, as it has been in the past, by reform from within. The earnest physician will seek to profit by the experiences of the masters, and to learn from them that morbidity and mortality furnish the enemy against which ceaseless warfare must be waged. The surgeon of the future will be grounded in pathology, trained in diagnosis, certified, and then apprenticed to a master in order that he may learn to apply that elusive element so essential for superior performance and known as surgical judgment.

Knowledge Is Power. Uncontrolled Knowledge a Menace

But courage and deftness of hands and familiarity with books, technical craftsmanship and anatomic precision are only the implements with which the physician does his work. They are at one and the same time either agents of mercy ordered by a just heart, or the tools with which the impostor, familiar with the technic, but unrestrained by a disciplined moral nature, preys upon the sacred confidences of the patient.

In 1914 Germany stood at the pinnacle of national influence. Her leaders in government, in science and religion had become known as supermen. But out of the years of training required to bring its subjects into this enviable place had been left an essential element, which ever calls for conduct upon the basis of simple justice — taking into account the rights of others. Guided by stalwart men with scientific minds but with sordid hearts and neglected ideals, the liberties of the world were threatened. High ideals and moral integrity born of the precepts, and predicated upon the principles of the Christian faith finally won the first World War and turned back the threatening cloud of super-science.

Unhappily, we face a similar situation in this good year of 1942, wherein the so-called Axis powers, and again guided by unholy motives, have banded themselves together in an effort to crush the decent and law abiding peoples of the world. Educators and statesmen face the task of closing the gap between the creative genius of man and the human use of the products which are fashioned. Vaulting ambitions tend to run away with judgment. Safeguards must constantly be erected to save man from his own folly. In the field of medicine there is a lag of some years between the discovery of new procedures and the time when safe technics are perfected for their application. There is, too, a fundamental difference between the science which discovers, and the art which reduces research to practical application. It is the clinician who must assume responsibility for the safe use of powerful instruments which are with increasing tempo flowing from the laboratories of research. In brief, the pressing problem of medicine, as is true of other service groups, is to develop leadership

that will re-emphasize the essential role of the humanities in the successful application of science to disease.

If the human element is neglected, if decency and fair play are to have a declining place in the picture, all professions and all trades, together with governments, will learn perhaps too late that a Frankenstein has been erected under which civilization itself will fall.

For basic instruction in these safeguards, we must continue to look not to medical schools but to home and church. When neglected there, colleges and graduate schools can do little more than apply a veneer which unhappily fails when the test comes. It is, therefore, the obligation of the profession to continue to point out that thorough training in ethics must precede and regularly complement technical knowledge if maximum efficiency is to be obtained, and standards set by which the rights of the patient can be protected. It thus becomes evident that with nations, and no less with individuals and groups, uncontrolled knowledge carries danger of high potentials.

What the true physician longs for is not more technical training but less faulty judgment; not more abstract knowledge but a moral standard which weighs the remedy against the hazards which are assumed. There are even some who believe that medicine must eventually fall under the guiding hand of Government, professing faith in the ability of a regimented system to shield the public against present or future deficiencies. If there are forebodings which seem to point to revolutionary changes in the methods of delivery of medical services, what course should we pursue? Our most effective weapon against those who in ignorance press for radical change is not acrimonious debate born of fear, but rather a determination to renew our allegiance to those values that have made the present system the most effective in the world. If we leave the choice of methods to the public, who are primarily concerned and in whose interest we reject bureaucratic medicine, if we accept the responsibility which is our own to continue to serve the sick out of a love of the profession and its standards, which call for negation of all selfish designs, if we give leadership in the solution of problems of distribution and in methods for the care of subcomfort groups, if we keep our eyes on quality — high quality for all rather than quantity at the price of mediocrity — we shall find that the force, fraud and misrepresentation which misguided reformers hurl against America's free profession will be of no avail.

Essential Lessons of the Moment

In conclusion and prophetic of what I believe to be the essential lessons of the moment for all of the people, I repeat a sentiment expressed in 1920 in an address to this Association by the then President, the late Dr. Edward G. Jones.

"Standing as we are today on the threshold of a future whose oracles are dumb and opportunity powerless to wing its flight, beset with gravest difficulties and obstacles as never before, to foster moral citizenship and genuine Americanism has come to be, I believe, the peculiar opportunity and duty of the hour, a duty which I am sure it will distinguish us to embrace, and which I am equally sure it will discredit us to neglect."

As in April of 1918, the holocaust of war again hangs like a stifling cloud over the peoples of the world. Anxiety that will not be assuaged tears at the heart strings of humanity. Men and women of exceptional fortitude and in many lands look in vain for the solace of hope which in other world crises sustained them when the sterner virtues failed. Whence will we go for the moral stamina and the unconquerable will to pit against the powers of darkness unless it be to the all-embracing fountain of all strength, the eternal virtues of life upon which our nation was founded. These age-old, enduring truths believed with the whole heart, were towers of strength to the builders of the past. Thus appropriated and fervently applied to current problems, they shall again endow us with the strength that is needed to bring victory to our arms, justice to our foes, answers to the perplexing questions of profession, group and state, and in the end, under Providence, peace to our own turbulent souls.

OSTEOMYELITIS

Report of Case

I. B. Cantor, M.D.
Atlanta

It is not my intention to revolutionize the various efficacious methods that have been employed in the past as therapeutic procedures for osteomyelitis. However, anyone who has had any experience with this condition has been impressed with the obstinacy and lack of amenability to heal with the usual methods of treatment. During the course of treatment of the patient whom I am going to report, the idea occurred to me to employ two comparatively new drugs to a rather chronic case and, much to my surprise, healing took place in a rather short time. Before going into the details of this case I wish to review some of the facts concerning the antivirus, Antipeol.

The term antivirus, as defined by Besredka, is applied to the following: When a two-week old broth culture incubated at 37° C., after being passed through a porcelain filter, is reinoculated with the same organism further development of the bacteria is prevented. This preventive action is not due to the exhaustion of the nutritive properties of the medium, as is clearly shown by the ready development in it of other bacterial species, but is specific against the original microorganisms. For example, a broth culture of staphylococcus thus filtered would prevent the development of staphylococci, whereas streptococci and other pus-producing organisms would develop in the filtrate as readily as in the original pure broth medium. This experiment shows that the bacteria produce a reaction-product during their growth in the broth, which, after filtration, possesses the power of preventing the growth of the organisms producing it. This product is the antivirus.

The strength of the antivirus differs in degree according to the antivirus-forming or antivirus-resisting properties of the particular strain of the bacteria used. The most effective strain for the production of antivirus is that which creates an active antivirus against itself and also against similar strains, and then ceases to develop either in the original antivirus or in the antivirus of any similar strain (Bertarelli).

The antivirus does not develop an actual bactericidal effect but prevents the development of the bacteria and thus brings their growth to a standstill. In combination with certain chemical substances the antivirus remains fully potent for a very long time. Maurin's experiments in this respect are illuminating. He reports that a mixture of 25 per cent antivirus with a 75 per cent ointment base of lanoline, petrolatum, and cocoa-butter, after one year's storage, was equally as effective as the fresh antivirus on infected rabbits. Rabbits which were subcutaneously inoculated on the abdomen with 1.5 cc. of a staphylococcus culture underwent general infection with severe local purulence and succumbed; other rabbits which had been treated cutaneously on the abdomen for forty-eight hours with fresh antivirus, or with the year old ointment and then similarly inoculated, were completely healed in ten days.

Consequently, these experiments led to the discovery of Antipeol which is prepared from sterile filtrates of staphylococcus aureus, albus, and citreus; streptococcus pyogenes, viridans, and hemolyticus; and B. pyocyaneus. Antipeol ointment contains antipeol liquid in a lanoline base containing zinc oxide, sulfoichthyolate of ammonium and sodium borate. Thus it has been claimed that this product checks infiltration, liquifies and dispenses pus, and stimulates granulation.

As for the chemistry of sulfanilamide powder I will not attempt to delve into the details of the same because of the numerous references that have already appeared in the literature.

This patient, a white laborer, aged 27, was well-developed, and well-nourished. He struck his upper left leg on an angle iron on Sept. 4, 1940. However, he did not report to my office for treatment until five days later. At this time examination revealed a traumatic laceration of the upper third of the left leg measuring 3 x 2 x 1 cm., and exposing the bony surface. There was a malodorous thick greenish-yellow exudate escaping from the wound. In spite of the application of the

usual types of medications, such as tincture of metaphen, urea crystals, allantoin, peroxide, sulfanilamide powder, sulfathiazole powder, infra-red light therapy, etc., healing did not take place. Cultures were made of the exudate and a mixture of staphylococcus aureus, albus; and streptococcic viridans and hemolyticus, were found. No mycoides type of infection or sulfur granules were found. At this time the possibility of syphilis or osteomyelitis was suspected. Blood for the Wasserman reaction was obtained on November 29 and again on December 5, both of which were found to be negative.

Upon inquiring into his past history it was revealed that he had an old greenstick fracture at the site of his present injury. This fracture, which was sustained in 1934, healed with no complications. On December 7 an x-ray examination revealed an ancient healed greenstick fracture and a low grade osteomyelitis in the upper third of the left tibia. On December 18 an osteotomy and curettment operation of a bone abscess in the upper third of the left tibia was performed under sodium pentothal anesthesia. Sulfanilamide powder was sprinkled on the exposed area and a vaseline gauze packing was inserted. During the subsequent three weeks the patient was confined to bed and was not allowed to bear any weight on his limb. During this period the vaseline gauze packing was left undisturbed. Despite repeated applications of sulfanilamide, sulfapyridine and sulfathiazole powder, in combination with infra-red light therapy, the wound refused to heal although there was no infected tissue remaining. In view of the fact that a clean granulating surface had been obtained, pinch grafts were applied over the denuded area but these did not take. Application of Antipeol ointment during the subsequent three dressings revealed no improvement. Scarlet red ointment applications did not alter the status of the wound. It was at this time that I decided to employ a combination of the Antipeol ointment and sulfanilamide powder. My method of application consisted of sprinkling sulfanilamide powder into the wound and then applying Antipeol ointment over the powder. In approximately two and one-half weeks the wound was completely healed and on April 26, 1941, the patient was discharged as cured.

I am presenting this case report to the medical profession with the hope that such treatment may be tried with similar results in wounds of a rather slow healing nature.

Medical Arts Building.

THE CASE FOR INCLUSIVE RATES

Inclusive rates or flat rates are rates for hospital services which endeavor to provide complete "hospital" care at a fixed *per diem* charge. Inclusive rates spread the cost of probable expenses over whatever group of patients happens to be hospitalized in a given institution. The patient who does not incur extra expenses helps to pay for the patient who does. When applied to hospital services exclusively, the system may have much to recommend it; at least, numerous articles have been published in hospital journals advocating such procedure. When the system is extended to include medical and surgical services, however, some problems arise which bear analysis.

What medical services should be included? Should they be limited to routine diagnostic medical services or should they include complete medical and surgical services? It is estimated that 90 per cent of a given "hospital" bill represents routine hospital services, and approximately 10 per cent diagnostic medical services, such as radiology and pathology. By a simple extension of the hospital *per diem* charge, general medical and surgical services can be included in a flat rate and, indeed, such rates for tonsillectomy and obstetrical services have actually been used in some institutions. Under such a system the hospital inevitably acts as a middleman in the furnishing of medical services, and for all practical purposes a corporation practices medicine. The hospital competes with the private physician in his office—a paradox, inasmuch as the hospital owes its very existence to the physicians of the community who act on its staff.

The advantages of a flat rate system are convenience in billing, partial predictability of expense, and availability of various medical and surgical services, including laboratory tests, which may or may not truly be indicated.

The disadvantages of an inclusive rate system are as follows:

1. Patients who do not need elaborate diagnostic services and other tests still have to pay their share for such.

2. These special services then tend to be used excessively (experience shows a 100 per cent increase in the use of x-ray and laboratory services). Provision is rarely made for additional technical personnel or supplies and the quality of the diagnostic service therefore suffers. (It is obvious that some patients will have roentgen or clinical laboratory examinations which they might not otherwise receive, but the quality of those examinations is usually so diluted that the ultimate benefit to the majority of patients is *decreased*.) .

3. Diagnostic benefits are followed by general surgical benefits: the physicians performing these services are first paid on a fee basis, then on a salary basis. When physicians are on a salary basis (outside of research or special teaching institutions), the hospital usually controls the practice. In times of stress the management tends to cut salaries, rarely to raise them later. The physician finally is picked for the salary he will accept rather than for the qualifications he possesses.

4. After a flat rate has been determined it tends to stay at that level for some years. Though scientific and other developments in the field of medicine may require totally different types of procedure within a few years, the flat rate will tend to preclude such procedures if they are at all unusual or require elaborate equipment.

5. Flat rate systems do not sell themselves; they must be sold, *i.e.*, advertised; they must be sold in competition with other flat rate services. Claims for this or that institution and its staff begin to develop.

(Continued on page 256)

THE PRESIDENT'S PAGE

Many young doctors are entering the service of our country at great sacrifice. They are volunteers to assure "our way of life." Nothing else matters now. To all of you who have entered and those to follow please be assured that the Medical Association of Georgia will have a keener interest in your welfare and will maintain fervent hopes for your safe return. Experiences and knowledge gained will increase your true values. Thus will your country, your loved ones, your friends and yourselves be benefited. Keep fit and make 'em fit!

Voices: Around Georgia I hear voices speaking in the known and "unknown tongue." The confusion is not marked as it was a generation ago on many medical subjects. Blackouts have been replaced by twilight in the field of nutrition and we see dimly forms of undernourished children restless, nervous, underweight, discouraged and sluggish mentally and physically. Adolescents and adults are frequently affected in like manner. Salesmen speak in favor of their brands of vitamins. From national and state capitols health workers endeavor to inform us about the new and significant changes in knowledge.

Authorities tell us that we have available sufficient scientific knowledge if properly applied to stop the cries of distress from malnutrition. They urge doctors to study the subject in order that they may wisely direct public opinion. Otherwise some other way will be planned to inform our patients on this vital question.

Since some diseases may be prevented and others cured through proper nutrition, it is natural to expect doctors to assume leadership. Should we fail a part of the practice of medicine will no longer be in our hands.

The medical profession will meet the challenge. In order to do this we must remember that two out of five Georgians are not eating a balanced diet. A still larger per cent should be figured among the admittedly ill. Listen to voices from the Department of Health and pass out to patients leaflets outlining balanced diets. Find out about and support the school lunch program and urge all schools to take advantage of its benefits to our children. Nutrition is part of our defense program.

The food stamp plan greatly aids such a program. With the purchase of every dollar's worth of food with blue stamps, the purchaser receives, free, in addition, fifty cents worth of orange stamps, which can be used for the purchase of foods of which there is a "surplus." Tell your patients to buy whole wheat or "enriched" flour. Tell them that adequate diet is just as essential as preventing infections.

Proper nutrition: 1, Increases active span of life; 2, Reduces absences from school; 3, Reduces days lost from work thereby increasing earnings and production; and 4, The national bill for public welfare, hospitalization and medical care would be cut thus reducing tax burdens.

Blockades, famines, rationing and the use of food as a weapon of war in the fighting zones bring distressing news. Our armed forces are fed scientifically now, and civilians should be, too. We must help. Several states have already pledged two-thirds of their farmers to raise 75 per cent of their food and the feed for their farm animals.

There is no field in the practice of medicine or surgery that will not be benefited by proper nutrition.

Therefore, all doctors should apply recent knowledge of this subject to the benefit of their patients, to their profession and, of course, to themselves. Teach food values. Dr. Parran says that we are wasting much money trying to teach half-starved little children. As you hear voices discussing nutrition let one be yours and remember to "do unto yourself" as you would have "others do."

Vacation time is any time you may set aside for yourself. Don't neglect this valuable plan for it is good for you as you so often say to your patients. Remember the rubber in your blood vessels as well as in your tires. It becomes brittle with age, too. Avoid too much mental or physical heat.

James A. Redfearn, M.D.

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478 Peachtree Street, N. E., Atlanta, Ga.

JUNE, 1942

ORGANIC CHANGES IN THE BRAIN OF PIGEONS DUE TO THIAMINE DEFICIENCY

In 1940 R. L. Swank published an article in *The Journal of Experimental Medicine* entitled "Avian Thiamine Deficiency; a Correlation of the Pathology and Clinical Behavior," in which he demonstrated organic changes in the neurons of the central nervous system in pigeons. There were not only changes in the primary neurons but also in the central terminations of the optic nerves, as well as in the internuncial neurons in the cerebral cortex. In some animals there were also small hemorrhages accompanied by perivascular sclerosis.

Again in 1941 Swank and Bessey published an article, "Avian Thiamine Deficiency," in which they described characteristic symptoms as correlated to the organic changes taking place in the brain. Swank and Prados have recently published an article on the pathologic changes in the brain and cranial nerves resulting from thiamine deficiency, and they correlate such changes with the clinical behavior of pigeons deprived of thiamine.

The known pathologic changes taking place in the neurons of thiamine deficiency pigeons may now be correlated to some extent with electroencephalograms made during different stages of an acute thiamine deficiency. Such encephalograms have recently been made by Swank and Jasper, which are described in an article in the May, 1942, issue of the *Archives of Neurology and Psychiatry*. From their experiments it seems that normal pigeon brain potentials taken without anesthesia have a predominant regular frequency of 25 to 35 per second and the amplitude of this predominant rhythm was between 10 and 40 microvolts. The slower regular waves of larger amplitude were obtained only in the thiamine deficiency pigeons or in those whose brains had been damaged with operative procedures. The authors published some very interesting graphs in which they show the abnormal brain waves with increased amplitude as compared with those of normal pigeons. It is also interesting to note that after thirteen days of a normal diet containing thiamine, the brain waves of the pigeons returned to normal, indicating that unless the nerve cells are completely destroyed, proper functioning of the brain is restored in a period of two weeks.

JAMES N. BRAWNER, M.D.

THE MEDICAL STUDENT OF TODAY

In America we are blessed by living in a country richly endowed, a nation producing 100 billion kilowatt hours of energy a year, or work equal to the human power of one-half billion men working eight hours a day. So never sell America short, no matter what happens in the rest of the world. What of the medical student? His greatest asset is health. Nothing can take its place. A smooth, efficient human machine is something devoutly to be wished and to guard. There are a method of living and a system of life which are conducive to that state. This demands systematic planning of work and recreation and exercise and diet and the avoidance of all factors which induce or favor disease. The modern student rarely learns to allocate these essentials in their proper places.

The next great asset is to become a master workman. Today we see fear abroad. There is only one thing that cannot be taken away from you and that is what you store up in your forebrains — the knowledge of your profession. No matter what the future, medicine is an essential commodity because it deals with the only real common denominator which determines the destinies of the world, and that is mankind itself.

These buildings are dedicated to the study of man. You are to be entrusted with the lives of men, women and children. Our business is to prepare you for that task. Some of the mistakes you will make in later life you can trace to your omissions in the classroom.

I have a few suggestions:

Have a plan. Where do you expect to go? Lay a course and stick to it now. In the first two years you should master the fundamentals; in the last two years you use those fundamentals. You must master them. How beautifully the pieces of the jigsaw puzzle fit together when the whole course is mastered. You will learn modern medicine. It was my privilege to have as teachers Widal, who discovered the Widal reaction, Laveran, who discovered the malarial parasite, Roux, one of the assistants of the immortal Pasteur, and a number of those great men who in the latter part of the last century welded some of the links to make the mighty thing called medicine today, but none of them possessed the weapons against disease that you will possess.

Begin now the student habit. Medicine is rich with adventure. The impenetrable jungle is giving up its secrets day by day. Some day the spark may jump from a book or a magazine or a teacher and ignite you, and then suddenly you realize that you, too, have some of those qualities which made other men great in their chosen fields.

You never know what you can do until you try. The great French neurologist, Pierre Marie, pointed out that none of us use the full capacity of our minds. He said that many of the cells were in a state of atrophy from disuse. Nearly every great man I have known has had some physical infirmity or some mental complex to overcome before he could bring his full faculties into play.

Medicine today is founded on all that has gone before. Chemistry has not hesitated to knock at the very principle of life itself. Physics has not hesitated to shatter the atom. The electron microscope and the spectroscope foreshadow new things. We cannot afford to remain static. He who charts his course and will not allow himself to be diverted and uses every energy to reach his goal will rarely fail. Energy, dissatisfaction with existing conditions, a ceaseless striving after perfection reward the toiler with more muscle, more strength to climb.

There are few successes without some failure and few failures without some successes. To one man failure spells the end of everything, to another it only serves to spur him on. Few jobs fail to respond to the ceaseless biting off piece by piece.

Finally a great school has first morale, then discipline and, last but not least, loyalty. Morale implies self respect and a healthy mind in a healthy body. Discipline implies respect to constituted authority and a consciousness of the purpose of our work; loitering in the hallways, putting your feet on the benches, talking when some one else is talking, residents who sit at the table when the Chief enters, nurses who are careless and noisy; patients who are unkempt, beds poorly made, wards littered with apparatus no longer needed, histories incoherent and illegible, all attest lack of discipline. In the absence of the Chief, the resident is literally the subchief and so responsible for discipline and order.

To paraphrase a British statesman in his finest hour, we shall fight disease wherever we find it by every means in our power, in the hills, in the country, in the homes. We shall learn all the methods of organized science to combat disease. We must never falter.

Abstract of address of Dr. Martin E. Rehfuss at the opening of the annual session of Jefferson Medical College, Philadelphia, Sept. 17, 1941, and published in the Journal of the Association of American Medical Colleges in March, 1942.

Reprinted from THE JOURNAL of the American Medical Association, May 16, 1942.

FIRST AID AND U. S. O.

First aid kits, and preliminary and advanced courses in first aid, are a part of the equipment and activity to be found in many of the 695 USO units in continental United States, it was announced following completion of a survey by Robert Heininger, director of the Program Division of United Service Organizations.

Wives of men serving in the armed forces of the nation, as well as the soldiers, sailors and marines themselves, are seeking the advanced instruction, given in cooperation with experts of the American Red Cross, Mr. Heininger said.

"Proficiency in first aid," said Mr. Heininger, "has virtually become a necessity for civilians today, and it is obvious that members of our fighting forces cannot be too expert in first aid. Naturally, USO is extremely pleased at this heightened interest in first aid training, and the increased use of the ever-growing facilities of USO."

Drugs, medical supplies and clothing valued at more than $3,500,000 have been sent to the U.S.S.R. by the American Red Cross in recent months, it has been announced. Additional shipments are now being prepared, and it is anticipated that the amount of relief furnished will be approximately doubled within the near future.

REDUCTION OF SCAR FORMATION WITH SULFATHIAZOLE

WADLEY R. GLENN, M.D.
HUGH HAILEY, M.D.
Atlanta

The following case report presents what may be an advantage in the treatment of infected wounds of the face.

On March 2, 1942, J. G. G. was chopping wood and accidentally struck a taut wire which caused the two-edged axe to flip back and produce a gaping wound two inches in length on his left cheek. It was sutured with continuous black silk by a physician in Virginia. Two days later he reported to duty at the Naval Reserve Aviation Base in Atlanta, where examination revealed frank pus exuding from the wound between the sutures. The sutures were not disturbed, though as much pus was expressed as possible. A thick paste was made by adding a few drops of sterile distilled water to a powdered tablet of sulfathiazole. With a thin-bladed spatula the paste was applied generously to the infected wound and a small gauze dressing was applied. In addition, the patient was given orally a total of 120 grains of sulfathiazole in two days. A fresh supply of the sulfathiazole paste was applied daily. On the second day of treatment a very small amount of pus (a droplet) could be expressed. Afterwards no drainage appeared and healing occurred by first intention. The sutures were removed on March 5 and the resulting scar was a thin line.

This case points out the value of sulfathiazole as an agent in curtailing scar formation. This simple procedure eliminates the old method of removing the sutures in case of infection and allowing the wound to heal slowly by second intention. It is believed that the resulting scar will be barely visible in a few months time. Shortly after the second photograph was made the patient was transferred to a distant station making the follow-up observation impossible.

U.S.N.R.A. Base, Atlanta.



Figure 1

March 2, 1942—patient was chopping wood and accidentally struck a wire which caused a two edged axe to flip back and produce a gaping wound two inches in length. It was sutured with continuous black silk by a physician in Virginia. Two days later (March 4, 1942), he reported to duty at the local reserve aviation base in Atlanta, when examination revealed frank pus exuding from the wound between the sutures. The sutures were not disturbed, though as much pus was expressed as possible. A thick paste was made by adding a few drops of sterile distilled water to a powdered tablet of sulfathiazole, with a thin bladed spatula the paste was applied generously to the infected wound and a small gauze acted as a covering. In addition the patient was given orally a total of 120 grains of sulfathiazole in two days. A fresh supply of the sulfathiazole paste was applied daily. On the second day of treatment a very small amount of pus (a droplet) could be expressed. Afterwards no drainage appeared and healing occurred.



Figure 2

The sutures were removed on March 5, 1942, and the resulting scar is a thin line.

Millions of Americans today desire to demonstrate their will to victory. Not all can be in the armed forces, not all can volunteer their services for humanitarian work, but all can volunteer their dollars to arm the Red Cross to be their representative at the scene of battle and distress.

The Division of Venereal Diseases of the USPHS has developed and put into motion a type of cooperative assistance project with the State departments of health which provides for Federal Civil Service appointments "for the duration of the war" of individuals who, lacking formal education or the desired experience, have proved that they can take over certain tasks in the VD control program which prior to this time have been performed for the most part by professional staffs.—State Health Departments, V. D., U. S. P. H. S.

The list of medical supplies needed in Russia was drawn up in conference between representatives of the Union of Red Cross and Red Crescent Societies and members of the American Red Cross and the British Red Cross who accompanied the official governmental missions of Great Britain and the United States to the U.S.S.R. last fall.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

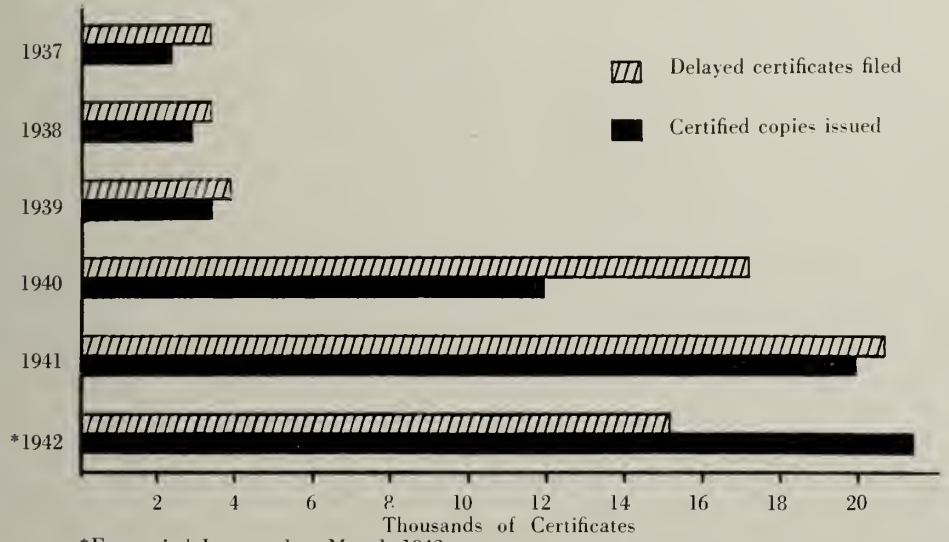
T. F. Abercrombie, M.D., *Director*

BIRTH CERTIFICATES, CITIZENSHIP AND NATIONAL REGISTRATION

In the last five years the necessity of having a birth certificate on record has been constantly increasing. The present World War emphasized this need of proof of citizenship. Since the attack on Pearl Harbor the demand for birth certificates to prove citizenship for working in the war industries and entering the armed forces has sky-rocketed and the Vital Statistics' office is swamped with requests for these records.

Using a birth certificate as the only evidence of one's citizenship is unfortunate in several ways, the chief trouble being that under present conditions a birth certificate is being used as a certificate of loyalty. The fact that a person was born in the United States does not mean that he is a loyal American citizen, nor does the fact that a person was foreign-born keep him from being a loyal citizen of the United States.

DELAYED BIRTH CERTIFICATES FILED AND CERTIFIED COPIES ISSUED BY THE GEORGA DEPARTMENT OF PUBLIC HEALTH 1937-1942



*For period January 1 to May 1, 1942.

Many native Georgians born before 1919 are having considerable trouble getting sufficient acceptable supporting evidence as to their parents' names, date and place of birth in order to file a Delayed Birth Certificate. A delayed certificate of birth is a record being placed on file at the present for a birth that occurred years ago and was not recorded at the time. This certificate with instructions for filing was drawn up by, and agreed to by the Federal agencies interested in birth certificates for proof of citizenship and age. It was adopted by the Georgia State Board of Health so that certified copies of delayed certificates filed in this office would be acceptable for proving citizenship for working in the war industries.

A birth certificate should be acceptable as part of the supporting evidence as to one's citizenship, but certificates certainly should never be considered the sole supporting proof as to one's citizenship and loyalty to his country. I say this because there is no definite means of identification between a certified copy of a record filed at the time of a baby's birth and the person who applies for a job in a war industry. Delayed birth certificates could and are being fraudulently filed.

When we stop to think about this matter we can see that in the future it will be even more necessary that we have proof of citizenship and identification readily available at all times. What the answer to this need will be is hard to prophesy, but I am of the opinion that we are headed for some system of National Registration. By National Registration is meant that every individual would be registered and given an identification card with a *number*, name, address, description, finger prints and possibly a photograph. This card would be carried or be readily available at all times should you be called upon to produce such a record.

Upon the birth of a child, the birth certificate would serve as an entrance into the National Register. The individual would have to report every year, or five years (within ten days of birthday, to cause an even flow of work in office)

in order to renew his card and to give any new information that would be valuable in identification. If a person moved from one registration district to another it would be necessary to check out of the old and into the new district. This would make it possible to locate all individuals at any time and would make information concerning population available at all times and would eliminate the necessity of the Decennial Census.

If we but pause and review the number of registers now kept by various agencies we see that there exists much overlapping and duplication of work and each of these systems is expensive to keep and probably none of them is always completely up to date. We see that we have birth registration, school registration (grammar school, high school and college), motor vehicle registration, voters' registration (city and county), social security registration, unemployment compensation registration, draft registration, registration for rationing of sugar, gasoline and other commodities, and finally death registration. In practically all of these systems the name, color, sex, age, date of birth, marital status, address and occupation are recorded.

At the present time there is no way in which these various registers could be matched one against the other with any degree of accuracy or speed. However, with a system of registration where every individual would be given a *number*, and such a number used on all registers, there would be a direct method of identifying every individual, and the files of various registers could be cross-checked, using the modern business machines for such purposes.

Such a system will eliminate the possibility of persons guilty of a crime in one section living under an alias in another section of the country. It would also eliminate falsifying as to age and other personal particulars, where such had to be furnished.

Such a system of National Registration would of necessity be a Federal Government function, and would probably be handled through the various post offices throughout the country with the United States Census Bureau cooperating in such an undertaking. The registration of births and deaths will continue to be a function of the various states and these records would serve as a mode of entry and exit from the National Register.

The following diagram presents graphically the increase in the demand for certified copies of records of birth certificates and the number of delayed certificates filed by the Georgia Department of Public Health during the period 1936 through May 1, 1942.

DAVID M. WOLFE, M.D., *Director*,
Bureau of Vital Statistics.

THE CASE FOR INCLUSIVE RATES

(Continued from page 250)

Ethics and consideration for the non-hospital-staff physician evaporate.

6. Finally, and most important, the flat rate system is administered by the executive board of the hospital. Many hospital executive boards are composed exclusively of laymen. Some hospital administrators emphasize that "the inclusion of medical men on the board is an undesirable practice." Therefore, if these plans get started in a community, there will be a tendency for a lay board to be in complete control of the medical services in that hospital. When short cuts or economies have to be effected, you may be sure that the hospital costs will not be the first to suffer. The *hospital* is in the practice of medicine.

Flat rates have already been employed in certain institutions for hospital and diagnostic medical services. There is an increasing barrage of propaganda in hospital journals to extend the medical features of the system to complete medical coverage. When this is done, the hospital will dominate the field of medical economics locally. The politician will see a simple way of grasping control not only of hospital care but also of medical care. The interesting thing, therefore, is that *flat rates will actually tend to the socialization of hospitals* as well as of the medical profession.. Hospitals, therefore, should themselves be the first to attempt a solution of the problem without recourse to a system which will play directly into the hands of the medical socialists.

What solution is there? One remedy would be to have hospitals print or type clear information sheets in the same manner as do hotels and restaurants. Patients, potential patients, and physicians could then see clearly what the various bed rates are, what the operating room charges may be, the nursing charges, and the average charges for medicines and dressings. The patient can and should be informed that the fees for medical services, whether they be diagnostic x-ray or therapeutic surgical services, vary with the ability of the individual patient to pay and can be discussed by his physician with such other physicians as may be involved, without any loss of efficiency or dignity. The personal interest and attention of a given physician, whether he be radiologist or obstetrician, pathologist or surgeon, are worth far more than any apparent convenience or apparent saving that might be effected by expanding flat rates.

The case for inclusive rates, therefore, does *not* exist. All thinking physicians, and especially hospital administrators and surgeons, should resist this superficially convenient but fundamentally destructive system. If flat rates for "hospital" services are endorsed today, you will see flat rates for complete medical and surgical services tomorrow. Therefore, address yourself to the problem in your own locality. Discuss it with your colleagues and make sure that those physicians who are connected with hospital staffs are apprized of the true facts while there is still time.—L. H. G.

—Reprinted from Radiology, Vol. 37, No. 6, pages 751-752, December, 1941. Copyrighted 1941 by the Radiological Society of North America.

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

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Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

REPORT OF THE THIRTY-THIRD BIENNIAL CONVENTION OF THE AMERICAN NURSES ASSOCIATION

Durice Dickerson, R.N., Atlanta
Executive Secretary, Georgia State Nurses Association

Ten thousand seven hundred nurses registered at Chicago May 17-22, 1942, for the Thirty-third Biennial Convention of the American Nurses Association which was held jointly with the National League of Nursing Education and the National Organization for Public Health Nursing. Over thirty nurses from Georgia attended this meeting.

Nursing at the Nation's Service

The eagerness with which these thousands of nurses attended this educational and inspiring program indicates definitely the solid unity of purpose of American Nurses to supply *quality* as well as *quantity* nursing service to our nation. The convention went on record as fully understanding and realizing the needs of our nation in its war effort and expressed complete and unified willingness to serve in whatever capacity that nursing in war service may dictate.

The National Nursing Council for War Service sent the following telegram which was endorsed by the American Nurses Association, pledging to the President of the United States its full support in this national emergency:

"An adequate number of registered nurses to meet military and civilian needs for the war is the sole objective of the National Nursing Council for War Service. This Council, now in session, is composed of representatives of the American Nurses' Association, the National League of Nursing Education, the National Organization for Public Health Nursing, the National Association of Colored Graduate Nurses, the Association of Collegiate Schools of Nursing and the American National Red Cross Nursing Service, and speaks for 200,000 registered nurses.

"The Council has pledged to the President of the United States its full support. The Nation's need can be met by the recruitment of an increased number of well-qualified young women for schools of nursing and by locating and encouraging inactive nurses to return to active work. The aggressive recruitment program already under way will insure a continuous supply of young nurses who are eligible for military service.

"The Council has endorsed the present program made possible by the 'Training for Nurses—National Defense Act' which is administered by the United States Public Health Service. It is convinced that the financial aid provided for the continuance of this program in the appropriation now before Congress is inadequate. The Council begs your consideration of these facts in relation to the magnitude of the health needs of the armed forces, the industrial army and the civilian population.

"On the basis of its study of current and future needs the Council is convinced that an appropriation of at least $4,000,000 will be needed for the 'Training for Nurses—National Defense Act' for the fiscal year 1943 and it undoubtedly will be necessary to increase this amount during the following fiscal year if the war continues."

Supply and Distribution

The American Red Cross Nursing Service and other speakers gave these facts: There are enough nurses but too few enrolled in the reserve for the armed forces.

Everywhere we hear Uncle Sam needs nurses. Our job then is to (1) analyze the country's need for the education, procurement, and assignment of professional nursing and auxiliary nursing service in relation to both military and civilian agencies relating to the national emergency; (2) to make plans for meeting these needs; (3) to correlate, as may be necessary, the nursing services of the United States with those of Canada, and Central and South America. How then and where are we to tackle this big problem? Following is a brief review of the work so far: An effort to determine the number of available nurses was made by taking an inventory of graduate registered nurses. On the basis of returned questionnaires it was estimated that there were approximately 400,000 in this country in July, 1941; that two-thirds of the 300,000 who replied were in active duty and that 20,000 of the inactive nurses would be willing to return to active duty if needed. Those "unmarried and under forty years of age" numbered 100,000 are considered "eligible" for military service. The National Nursing Council for War Service has a Committee on Distribution and Supply with a full time executive secretary who will work with state nursing councils in

(Continued on page 261)

WOMAN'S AUXILIARY : OFFICERS 1942-43

President—Mrs. J. Lon King, 223 Buford Place, Macon.

President-Elect—Mrs. Wm. Bruce Schaefer, Toccoa.

First Vice President—Mrs. Harry M. Kandel, 432 Abercorn Street, Savannah.

Second Vice President—Mrs. Walter G. Elliott, Cuthbert.

Third Vice President—Mrs. Ralph W. Fowler, Marietta.

Recording Secretary—Mrs. J. C. Metts, 303 Anderson Avenue, Savannah.

Parliamentarian—Mrs. S. T. R. Revell, Louisville.

Treasurer—Mrs. Lucius N. Todd, Rural Delivery No. 2, Augusta.

Historian—Mrs. Jack R. McMichael, Quitman.

Corresponding Secretary—Mrs. Wallace L. Bazemore, 127 Beverly Place, Macon.

Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta

New Officers

Mrs. J. Lon King, of Macon, was installed as president of the Woman's Auxiliary to the Medical Association of Georgia at the concluding session of the recent state convention in Augusta and Mrs. Bruce Schaefer, of Toccoa, was chosen president-elect. Other new officers are Mrs. H. M. Kandel, of Savannah, first vice-president and chairman of health education; Mrs. W. G. Elliott, of Cuthbert, second vice-president and chairman of Hygeia; Mrs. Ralph Fowler, of Marietta, third vice-president and chairman of scrapbook; Mrs. J. C. Metts, of Savannah, recording secretary; Mrs. Wallace Bazemore, of Macon, corresponding secretary; Mrs. Lucius Todd, of Augusta, treasurer; Mrs. S. T. R. Revell, of Louisville, parliamentarian, and Mrs. J. R. McMichael, of Quitman, historian.

Mrs. Lee Howard, of Savannah, presided at the convention sessions and gave splendid reports of the progress made along all lines during the past year. Awards were made as follows: Richmond County, the Mrs. James N. Brawner Cup; Randolph-Terrell counties, exhibit award; and Baldwin County, scrapbook award.

Mrs. King has appointed the following chairmen for the year: Public Relations, Mrs. Dawson Allen, of Milledgeville; Legislation, Mrs. Charles Harrold, of Macon; Press and Publicity, Mrs. J. Harry Rogers, of Atlanta; health films, Mrs. Leo Smith, of Waycross; Doctors' Day, Mrs. Leonard Massengale, of Lumpkin; Student Loan Fund, Mrs. H. G. Banister, of Ila; Jane Todd Crawford Memorial, Mrs. Ralph Chaney, of Augusta; Revisions, Mrs. James N. Brawner, of Atlanta; Archives, Mrs. Eustace Allen, of Atlanta; exhibits, Mrs. Edgar Shanks, of Atlanta; Research in Romance of Medicine, Mrs. W. T. Randolph, of Winder; and Mrs. James N. Brawner Trophy, Mrs. Lee Howard, of Savannah.

ANNUAL REPORT OF PRESIDENT OF THE WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA APRIL 30, 1942

On Tuesday evening I appeared before the House of Delegates of the Medical Association of Georgia and gave them a report of the Auxiliary work done in Georgia during the past year. This was a brief summary compiled from the reports sent to me by the State officers and chairmen of committees, district managers, and county auxiliary presidents.

Yesterday you heard the reports of district managers and county auxiliaries and today of the State chairmen and officers. Since you have this information I will try not to duplicate it but to make my report one of my own activities as your president and my efforts to fulfill my obligations to you and to the Medical Association of Georgia.

At the Post-convention board meeting held in Macon last May, immediately following the convention, chairmen of standing committees and delegates to the American Medical Auxiliary Convention were appointed.

In June, in accordance with the request of the president of the Medical Association of Georgia, auxiliaries were urged to work for the passage of Amendment 21 to the Georgia State Constitution. In July our executive board met in Savannah with our advisory committee from the Medical Association of Georgia. At that time objectives for the year were approved and plans of chairmen discussed and approved.

Following that meeting 700 copies of our objectives, accompanied by a letter from your president, were mailed to each member in good standing of our Auxiliary, and to the officers and chairmen of the A.M.A. and S.M.A. auxiliaries. Stationery was printed and delivered to State officers and chairmen and to district managers, together with directories of our executive board personnel. Copies of our directory were also sent to A.M.A. and S.M.A. Auxiliary officers and chairmen.

In August a meeting of interested Auxiliary members was held in Atlanta with Dr. R. V. Schultz, director of Health Education for the State Department of Public Health and also a member of our Advisory Committee, to further discuss and perfect plans for our Health Education and Health Film programs. Following this meeting we were entertained at lunch by the Medical Association of Georgia represented by Dr. W. A. Selman and Dr. E. D. Shanks.

With the assistance of our treasurer a com-

plete directory of the membership of our Auxiliary was prepared for the State Medical Journal. Also an article for publication in the medical journal was written at the request of our press and publicity chairman. In November I had the pleasure of attending the board meeting of the Auxiliary to the A.M.A. in Chicago.

In January I met with the Richmond County Auxiliary and plans were made for our State Convention. The program for the convention was compiled and sent to our press and publicity chairman to be published in the medical journal with letters of invitation from Mrs. L. N. Todd and myself, and to be printed for this convention.

In March questionnaires were sent to district managers and county auxiliaries. I have received reports from all district managers and from 25 county auxiliaries out of a total of 28 auxiliaries. whose dues were sent to our treasurer.

During the year I have written 325 personal letters and 100 cards as well as sending out, in addition to Objectives, 858 form letters. I have served as a member of the State Executive Council of the Woman's Field Army of the American Society for the Control of Cancer and of the State Nutritional Council.

I have attended 16 district meetings, 8 county auxiliary meetings, 2 meetings of the Women's Field Army for the Control of Cancer, 2 meetings of the State Nutrition Council, and made many health talks at meetings of various organizations. I have traveled 14,868 miles in the promotion of auxiliary work.

It has been a pleasure to preside at the board meetings and at this convention, and to perform the other duties of this office. This has been a hard year for all of us. With the United States at war, the duties of the medical profession have become more arduous and our obligations as an Auxiliary to serve them, more serious. May we live up to this obligation and go on to wider fields of service to the medical profession and to our country.

Respectfully submitted,

May duBignon Howard, *President.*
(Mrs. Lee Howard)

ANNUAL REPORT OF WOMAN'S AUXILIARY TO THE MEDICAL ASSOCIATION OF GEORGIA, 1941-42

In this annual report of the Woman's Auxiliary to the Medical Association of Georgia I will attempt briefly to picture to you the outstanding achievements of 1941-42, our eighteenth year of existence and service to the Medical Association of Georgia.

"To Aid in National Defense by a Well-Rounded Auxiliary Program of Service" has been our theme for the year, one which was indeed well chosen as our present national emergency has rendered more valuable than ever a program such as ours.

In July 1941 the Executive Board met in Savannah with our Advisory Committee. Dr. James N. Brawner, chairman, and our Objectives for the year, together with committee plans of work, were discussed and approved.

In August a meeting of a committee from the Auxiliary with Dr. R. V. Schultz, one of our Advisory Committee and Director of Health Education for the State Department of Public Health, was held in Atlanta to further perfect plans for our Health Education and Visual Education programs. This committee was entertained at lunch by the Medical Association of Georgia represented by Dr. W. A. Selman and Dr. E. D. Shanks.

Copies of our Objectives were sent to our entire paid membership as well as to the officers and chairmen of the auxiliaries to the American Medical Association and the Southern Medical Association. We are glad to report the organization of one new auxiliary this year, Sumter County. We have received dues from 28 auxiliaries representing 44 counties, with a total paid membership of 634. Of this number 625 are current members, 5 members in arrears, and 4 members-at-large.

Eighteen District Meetings have been held and 107 County Auxiliary Meetings.

Our committees on Health Education, Health Films, and Public Relations have worked closely together. In accordance with suggestions made by Dr. W. W. Bauer, director of the Health Education Bureau of the A.M.A., our programs have been taken to other organizations whose meetings were already arranged and into both elementary and high schools.

Heretofore our main emphasis in health education has been through speakers and the distribution of health education materials, but this year, because of the facilities available to us through the purchase by the Medical Association of Georgia of moving picture machines for use in each district, and the addition of many health films to the Health Film Library of the State Department of Health, we have emphasized health education through visual education and 87,814 people have seen these health films in programs sponsored by the auxiliaries. We have also distributed suitable health education material at these meetings to those who were interested in having it. I do not have a definite record of the amount of material distributed, but 21,225 pieces have been sent upon request to auxiliaries for distribution by the State Board of Health and other materials have also been used for distribution.

We have again emphasized nutrition through health education and visual education. It has been a problem to meet the demands of various

groups who wished to see films on nutrition.

We were delighted to present to the Medical Association of Georgia $124.25 as a small contribution for their health film library. This year we have received $28.00 from county auxiliaries for the health film fund.

Fifty-seven auxiliary members have served as health chairmen in other organizations and auxiliaries report participation in the campaign of the Women's Field Army of the American Society for the Control of Cancer, Red Cross and T.B. drives, many phases of Red Cross and Defense work, School Nutrition Lunch Programs, Dental Clinics for underprivileged school children, County Nutrition Committees and sponsorship of bed in T.B. Preventorium. Auxiliary members have assisted in clinics and other philanthropic work and are active in P.T.A. and Women's Clubs. Many are also serving as instructors in First Aid, Home Care of the Sick, and Hygiene Classes, and one Auxiliary reports the purchase of a Defense Bond.

Two hundred subscriptions to *Hygeia* have been secured through auxiliaries. Richmond County Auxiliary received honorable mention in the National *Hygeia* Contest with 53 subscriptions. Thirty-nine of the *Hygeia* subscriptions were placed in Libraries, Schools, Nurses Dormitories, Soldiers' Centers, etc. There were 16 subscriptions to the Bulletin of the Auxiliary to the A.M.A.

Our State Scrapbook has been kept up-to-date and also our Archives. Six auxiliaries have contributed material to our Research in Romance of Medicine Library.

Our chairman of the Jane Todd Crawford Memorial prepared an excellent pamphlet which was distributed to district and county auxiliaries, and nine auxiliaries have had Jane Todd Crawford Memorial programs. We contributed $5.00 to the Jane Todd Crawford Memorial Committee of the Auxiliary to the Southern Medical Association.

Our historian has on file three district auxiliary histories and 14 county auxiliary histories for 1941-42 and is working on the State Auxiliary History for 1941-42.

Twenty-one auxiliaries reported the celebration of Doctors' Day in a wide variety of ways, all of which paid tribute to the doctors who have served and are now serving humanity in Georgia.

In accord with the request of Dr. Bunce, auxiliary members worked for the passage of Amendment 21 to the Georgia State Constitution at the election last June.

We began the year with a balance of $1,566.22 in the Student Loan Fund. Through auxiliary contributions of $183.50 and repayments on loans amounting to $1,511.51, a donation of $33.07 from a doctor formerly helped through a medical school by this fund, plus $20.31 interest, the fund amounts to $3,314.61. Three students have been helped this year to finish their medical education, the amount lent them being $880.00. Three doctors, who were in the past helped from this fund, finished repaying their loans in full during the year. The Student Loan Fund accounts have been audited.

We have had excellent publicity in *The Journal* of the Medical Association of Georgia and local newspapers. We are deeply indebted to the Medical Association of Georgia for our space in the State Medical Journal and for printing our convention programs.

At our convention the "Mrs. J. Bonar White Awards" will be given for the best Exhibit and Scrapbook and the Brawner Trophy will be awarded to the auxiliary most fully meeting the requirements. In preparation for the convention, questionnaires were sent to District Managers, County Auxiliaries, and Convention Calls with credential cards to all Past State Presidents, State Officers and Chairmen, District Managers and County Auxiliaries.

We were represented at the convention of the Auxiliary to the A.M.A. last June in Cleveland by two delegates and at the convention of the Auxiliary to the S.M.A. in St. Louis in November by our Councilor to the S.M.A. Auxiliary.

We are very pleased to report that Mrs. Eustace A. Allen of Atlanta, is serving as chairman of Revisions to the Auxiliary to the A.M.A., and Mrs. Olin S. Cofer of Atlanta, as treasurer of the Auxiliary to the S.M.A. Mrs. J. U. Reaves of Mobile, Ala., president of the Auxiliary to the S.M.A. is to be our honor guest at this convention.

I have had the pleasure during the year of attending the board of directors meeting of the Auxiliary to the A.M.A., in Chicago, in November; 16 District meetings, eight County Auxiliary meetings and have traveled 14,868 miles in the promotion of auxiliary work. I have served on the State Executive Council of the Women's Field Army of the American Society for the Control of Cancer and attended two meetings of the Field Army, one in Atlanta and one in Waycross. I have also been a member of the State Nutrition Council and attended meetings of this council in Athens in June and January.

In addition to mailing 700 copies of Objectives, I have sent out 858 form letters, 325 personal letters and 100 cards.

I sincerely thank Dr. Allen Bunce, Dr. J. A. Redfearn, Dr. J. N. Brawner, Dr. Edgar Shanks, and the many other members of the Medical Association of Georgia who have helped me so generously during the past year. It has been a pleasure to serve as president of your Auxiliary.

Respectfully submitted,

MAY DUBIGNON HOWARD, *President.*
(Mrs. Lee Howard)

GEORGIA STATE NURSES' ASSOCIATION

(Continued from page 257)

supplying the needs for nurses.

The Georgia State Nursing Council for War Service has been active and has cooperated with the National Council. Two meetings of the State Council were held during the Chicago meeting where plans were made to exert greater effort to:

Increase enrollment of the Red Cross First Reserve (the official reservoir of nurses for the Army and Navy).

Secure greater number of retired nurses for service in this emergency.

Continue recruitment of well qualified student nurses for the already well established accredited schools of nursing.

Cooperate with the training program of American Red Cross in supplying auxiliary workers in communities where these workers are needed.

NEWS ITEMS

THE BIBB COUNTY MEDICAL SOCIETY, Macon, met on June 2. Dr. H. C. Atkinson spoke on *Hypothyroidism.*

THE GEORGIA MEDICAL SOCIETY, Savannah, met on May 26. The scientific program consisted of a *Symposium on War Wounds—Amputations* by Dr. Walter Norton, discussed by Dr. T. P. Waring and Dr. Lawrence Lee. A moving picture was shown on *Regional Anesthesia of Prepared Case Reports.*

THE MUSCOGEE COUNTY MEDICAL SOCIETY met on May 26 at the home of Dr. J. R. Youmans and assembled at a barbecue dinner after the business meeting.

DR. EDWIN R. WATSON, Atlanta, has been appointed Assistant Chief of Emergency Medical Service by Dr. T. F. Abercrombie, secretary of the State Board of Health. They work under the Citizens' Defense Committee and the Regional Office of Civilian Defense.

DR. WM. S. COOK was elected city physician by the City Commission of Albany May 20; Dr. J. A. Redfearn, president of the Medical Association of Georgia, in a letter to the City Commission called attention to several patients with tuberculosis in Albany and the necessity of having sufficient wards for tubercular patients in the event the Commission built a new city hospital which it was urged to do.

AMONG THE PHYSICIANS OF MACON being inducted into the Medical Corps of the U. S. Army, Navy, Air Corps and other services are: Doctors H. C. Atkinson, Tom L. Ross, R. G. Newton, Sam E. Patton, W. D. Jarratt, A. M. Phillips, William Barton, Raymond Suarez, Charles Boswell and Robert W. McAllister.

THE PROGRAM OF THE EMORY UNIVERSITY ALUMNI ASSOCIATION was substituted on June 1 for the regular program of the Fulton County Medical Society. Subjects of addresses follow: *Reflexes Observed During Abdominal Surgery* by Dr. Walter Jones, Miami, Florida; *The Teaching Program in the Department of Medicine*, Dr. E. A. Stead, Jr., Professor of Medicine of Emory University, Atlanta; *Anterior Segment Eye Diseases*, Dr. W. B. Clark, Professor of Ophthalmology, Tulane University, New Orleans; *The Internist's Responsibility Regarding Surgical Problems*, Dr. W. K. Purks, Vicksburg, Miss. Officers of the Association: President, Dr. L. L. Whiddon, Fort Pierce, Fla.; First Vice President, Dr. A. J. Merrill, Atlanta; Second Vice President, Dr. C. S. Ward, Jr., Atlanta; Secretary and Treasurer, Dr. E. A. Bancker, Jr., Atlanta.

THE BULLETIN OF THE FULTON COUNTY MEDICAL SOCIETY, published on June 4, carried articles, titles of which follow: *President's Page* by Dr. Major F. Fowler; *Psychosomatic Illnesses in Urban Practice* by Dr. R. S. Leadingham; *Neoplasms of Ampulla of Vater* by Dr. Lon Grove and Dr. Earl Rasmussen; *Acute Pancreatitis* by Dr. John R. McCain. In addition there were other articles in reference to Government service and others of varied importance.

OBITUARY

Dr. Frank L. Adams, Elberton; member; Southern Medical College, Atlanta, 1890; aged 74; died May 3, 1942, at his home after a long illness. He was a prominent physician and did an extensive practice in Elbert and adjoining counties. Dr. Adams represented Elbert County in the General Assembly of Georgia for a number of terms. He was held in high esteem by hundreds of acquaintances and was one of the State's best citizens. Surviving him are two daughters, Mrs. M. M. Park, Valdosta, and Mrs. Flora Purvis, Elberton; one son, Thomas Adams, Dearborn, Michigan. Funeral services were conducted at Rock Branch cemetery at the graveside.

Dr. John C. Stovall, Turin; Emory University School of Medicine, Emory University, 1894; aged 72; died April 23, 1942, at his residence. Formerly he practiced medicine in Gainesville and surrounding territory until disabled. He was a prominent physician and citizen and a member of the Turin, Georgia, Baptist church, where funeral services were conducted. Burial was in Alta Vista cemetery at Gainesville.

BOOK REVIEW

NEPHRITIS. By Leopold Lichtwitz, M.D., Chief of the Medical Division of the Montifiore Hospital, Clinical Professor of Medicine, Columbia University, New York. Cloth, Price $5.50. Pp. 328, with 120 illustrative tables and figures.

An excellent presentation of the subject summarizing present-day knowledge of kidney disease, the factors that have developed this knowledge, and the results of the author's own wide clinical experience. There is no unnecessary material but the reader finds adequate discussion, simply written, easy to read and to comprehend. Especially should be mentioned the chapters on the physiology, pathology, and mechanism of albuminuria and cast formation; on water metabolism, diuresis, anuria, and the mechanism of the various types of edema with their differential diagnoses; on the renal functional tests; on uremia and on the regula-

tion of blood pressure with the classification of hypertension. The conception of nephritis is further simplified by chapters on the diagnosis and treatment of glomerulonephritis, focal nephritis, and the nephroses. A valuable book for all doctors interested in the kidney from any standpoint.

HAL M. DAVISON, M.D.

DANGERS OF LAXATIVES AND POULTICES FOR APPENDICITIS ARE STRESSED

The dangers of laxatives in appendicitis are again stressed by J. Shelton Horsley, M.D., John S. Horsley, Jr., M.D., and Guy W. Horsley, M.D., Richmond, Va., who state, in *The Journal of the American Medical Association* for Sept. 30, that "an 'early' appendicitis may with a purgative or an enema become 'late' and gangrenous in twenty-four hours." The use of ice bags and poultices to the abdomen are also responsible in many cases of appendicitis for the development of an abscess or peritonitis.

In discussing the authors' paper Sara M. Jordan, M.D., Boston, declares: "The individual member of the population at large has an obligation in combating his or her disease. We must accept the responsibility of educating the public that when one has a bellyache, one must not attempt to freeze or cook the pain out. It is not to be treated with poultices, plasters or adjustments, pain relieving drugs, food or drink. Purgatives, laxatives or cathartics are not to be taken. If that bellyache lasts for two hours or longer, a competent physician is to be called and given full responsibility. Our profession and the public must be emphatically told that for acute appendicitis there is only one ultimate routine, the surgical one, and that delay is dangerous."

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Ciba offers Nuporals, an effective anesthetic throat lozenge, as a valuable addition to your therapeutic armamentarium.

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In addition to the wide and satisfactory experience with Nupercaine, Nuporals have been found, on clinical trials, to allay pain and tenderness of the mucous membrane of the throat and mouth as well as to diminish pharyngeal reflexes.

Nuporals usually alleviate the discomfort of "sore throat" and aphthae (ulcers) and allay post-tonsillectomy distress. Nuporals may also be used to decrease the sensitivity of the pharynx prior to the passage of a stomach tube. In addition, Nuporals similarly facilitate pharyngeal and laryngeal examinations and treatments

The fraction earlier supplied in powder form as Liver Extract No. 343 is now designated Liver Extract, Lilly, each 12.75 Gm. or three vials containing 1 U.S.P. unit for oral administration. Ampoules Solution Liver Extract, 1 U.S.P. unit per cc., is identical with the product formerly entitled Solution Liver Extract, Lilly, and Ampoules Solution Liver Extract, 2 U.S.P. units per cc., is the product previously available as Solution Liver Extract Concentrated, Lilly. Solution Liver Extract Purified is now marketed as Ampoules Solution Liver Extract, 15 U.S.P. units per cc.

LIVER EXTRACTS, LILLY

Since the demonstration of the effectiveness of liver in pernicious anemia by Minot and Murphy and the early chemical work on this substance by Cohn and his co-workers, there has been steady progress toward the purification an deventual isolation of this substance. In order to simplify identification of various fractions now in general use, Eli Lilly and Company has revised its labels and the names identifying certain of the Liver Extracts. Lilly.

SUMMER DIARRHEA IN BABIES

Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the 24-hour formula and replaced with 8 level tablespoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of Dextri-Maltose may safely be added to the formula and the Casec gradually eliminated. Three to six teaspoonfuls of a thin paste of Casec and water, given before each nursing, is well indicated for loose stools in breast-fed babies. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

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SYMPOSIUM ON PUBLIC HEALTH PROBLEMS

NUTRITION IN A STATE HEALTH PROGRAM

T. F. Abercrombie, M.D.
Atlanta

Soil fertility is probably Georgia's largest permanent problem and nutrition, the major public health problem affecting the largest group of people, is closely allied with it.

When all men got their food directly from nature, as hunters, fishers, or farmers, they could be more sure, in some ways, of getting a balanced diet. All our foods are directly or indirectly derived from plants—plants have their roots in the soil. First the soil, then plants, then animals — so has life developed. Man is a combined product of inheritance and environment. Food is the environmental factor that most directly controls his physical development; and it undoubtedly plays an important part in setting the pattern of nervous and emotional responses that make up the total personality.

Primitive man's food supply was restricted to that immediately at hand and was determined in both quality and quantity by the soil and climate. The kind of food available and its composition were important in determining survival and the differences in the physical development of men from different areas. Food supplies had geographic limitations. Some groups of men died out altogether; others changed form through generations as the result of natural diet restrictions. Thus through painful and costly experience, with much loss of life by the way, racial food habits and appetites were built up and came to be fair guides to the choice of food under simple conditions of living.

A newer knowledge of nutrition gained during the past three decades gives a rational basis for food selection that, applied through planned production, education in food choice, and more satisfactory distribution, can be used to increase the length and improve the quality of human life. Fewer natural foods and more processed and fabricated foods are used today. There is a far greater variety of foods available. Tastes have changed. As a result, racial habits and appetites can no longer be depended on to guide the choice of food.

We now produce a great variety of foods of high quality. The pleasure associated with eating has become more refined. Flavor, keeping quality, and price tend to be emphasized to the neglect of nutritive values of foods. Processing, packing, and special services have added to food prices. The purchaser rarely knows which portion of his dollar goes for services and which for the food itself.

The final selection of food is an individual and family problem. The science of nutrition now offers a guide to this selection. Education is needed to make this science better known. Agriculture and industry must solve the problems of producing and distributing foods of high nutritive value. Human nutrition is an economic and an educational as well as a public health problem. That unfortunate group — "Tobacco Road" people — can trace their plight to soil erosion and malnutrition. As the land has been depleted, degradation and hopeless despair have overtaken the people and produced the "Tobacco Road" population. This type of individual, and every state has its share, is not "that way" from choice. They are victims of a vicious cycle

Read before the Medical Association of Georgia, Augusta, April 29, 1942.

of malnutrition producing decreased efficiency which, in turn, produces greater malnutrition and greater inefficiency, finally leading to hopelessness and economic and social liability. This cycle can be broken by food.

Although the state-wide nutrition program is less than two years old, progress has been made in expanding and developing the service. The program was begun with the employment of an experienced nutritionist. The progress, to a large extent, has been made possible by active participation of numerous groups and organizations and the enthusiastic interest of the general public.

Activities of Nutritionist

Local health departments are visited and individual conferences held with health officers throughout the State. These visits and consultations serve to familiarize local units with the nutrition service and enable the nutritionist to learn the problems in various localities.

Efforts to secure the interest and cooperation of public health nurses in advancing proper nutrition have met with success. Nurses incorporate the giving of nutrition information in their home visits to patients, their school contacts and their work in health centers. The nutritionist makes talks at nurses' institutes and holds individual conferences with nurses throughout the State. The nutritionist also accompanies the nurse on home visits to families in different parts of the State. In this manner, practical information is gained on the nutrition problems confronting the nurses in their work.

The nutritionist attends maternal and child health centers and gives food demonstrations. These lessons on food preparation accomplish three main objectives, namely: serve to give valuable information to nurses in the centers, teach correct procedures for future demonstrations, and impart nutrition instruction to the mothers who attend the centers.

In working with educators, the teaching of nutrition in schools is stressed, as it is considered that the establishment of proper food habits in children will do more than any one single thing to improve the nutritional status of the people of Georgia. Not until recently has any attempt been made to teach nutrition in elementary schools.

During 1941 a total of 232,416 copies of material on nutrition were distributed to the public. All of these publications were prepared by the State nutritionist.

The nutritionist's activities, in general, are devoted to acting as consultant and advisor to public health personnel and civic and lay groups promoting nutrition, preparing publications for distribution, delivering talks and papers, giving food demonstrations, and making field contacts.

School Lunch Program

The nutritionist devotes much time to promoting the school lunch program in Georgia. Talks are made on the value of hot lunches to school children before civic organizations in an attempt to gain their support for the project. School lunch rooms are visited in different sections of the State and detailed records kept on each lunch room.

The Works Progress Administration cooperates extensively in the successful operation of the school lunch program. During 1941, through 951 lunch rooms and approximately 3,000 W.P.A. workers, a total of 19,218,437 school lunches were served. In addition, a summer feeding program was carried on at 68 locations, serving 199,502 meals.

The Surplus Marketing Administration, through furnishing surplus foods to the lunch rooms, plays a vital role in expanding the program. During 1941 1,742 schools receiving surplus food provided 257,668 school children with hot lunches; while 1,331 schools receiving surplus commodities furnished 261,441 school children with raw or uncooked lunches.

Despite the progress in the school lunch program, less than 50 per cent of the elementary and high schools in Georgia are providing children with hot lunches.

Reduction of failures, improved school attendance, fewer minor illnesses, weight gains, and all around improvement in health of school children are noted by schools serving hot lunches to their pupils.

Such evidence is unquestionable proof of the value of the program.

Nutrition Committee for Defense

As an outgrowth of the National Nutrition Conference, a State Nutrition Committee for Defense was organized comprising 75 members representing 41 different organizations or groups. The State Committee was divided into 11 working committees covering every angle of nutrition service.

The chief aims of the State Nutrition Committee are to prepare scientific information on nutrition for distribution and to coordinate the nutrition programs of all organizations in the State. To this end, County Nutrition Committees were set up in every county in Georgia, to study nutrition problems in individual counties, distribute nutrition material and evolve solutions to respective problems.

American Red Cross Classes

During 1941, the Atlanta Chapter of the American Red Cross completed 12 classes in nutrition and issued 114 nutrition certificates. Two canteen courses were completed with 22 members receiving certificates. These classes were given all over the State, under the supervision of the Red Cross, but statistics are not yet available concerning them. They represent a distinct contribution to the state-wide nutrition program.

Woman's Auxiliary

The Woman's Auxiliary to the Medical Association of Georgia took the promotion of good nutrition for their project during the past year. They sponsored group meetings on nutrition and showed a number of nutrition films. They also distributed, largely to lay people, 11,000 copies of nutritional material furnished them by the State Health Department. Cooperative activities of this type help to expand the state-wide nutrition program more than could otherwise be accomplished.

Sparta Child Health Demonstration

There are many things yet to be determined about nutrition and its place in a state-wide health program. With this in mind, a Child Health Demonstration, with special emphasis on nutrition, was established in Hancock County on July 1, 1936. At that time it was realized that the problem of nutrition was directly concerned with soil fertility. A serious attempt is being made to establish scientifically the belief that improvement of soil fertility is a basic factor in rural health improvement and will result in better nutrition. Every effort is being made to pool the knowledge and resources of all agencies interested in human betterment in order to demonstrate a sound rural life pattern among people who are urged to live with the soil, rather than off of it.

A study of food habits, begun in 1938 by Demonstration staff nurses, reveals significant improvement in food habits among the prenatal group of patients. This group has been subjected to intensive nutrition education by the staff nurses and other personnel. One hundred food records for 1938 were compared with an equal number taken during 1941. In 1938, 19 women were drinking one quart of milk daily, while in 1941 the number had increased to 30. The number drinking no milk decreased from 42 to 24. The number using no eggs declined from 89 to 31. The best improvement shown was an increase in the consumption of two or more vegetables (other than potatoes) daily from 32 to 89.

During 1941 an extensive survey of food habits of colored school children was undertaken. Analysis of 1,000 of these records, representing the daily food intake of 7,000 school-child days during the early winter season, indicates a total composite of 56.2 per cent of a perfect score. While this cannot be taken as an accurate figure, it certainly indicates a serious shortage of the protective foods in the diets of this group of the population.

Further analysis of this data shows that 16.2 per cent of these students drank no milk during the week. Milk intake recorded on a group of colored children in 1936 showed 37.5 per cent drinking no milk. This is a significant improvement of this group.

The extent of the problem of nutrition may be indicated by a survey of food consumption and production facilities in Hancock County, made by the Nutrition Steering Committee (an outgrowth of the National Nutrition Conference) which shows that

98.8 per cent of the families in this county are without home grown beef; 78.6 per cent are without wheat production for home consumption; 66 per cent of the families have no cane; 51.9 per cent have no cows; and 34.2 per cent are without fruit trees of any kind.

Demonstration health gardens of one-half acre each on 16 different farms have been supervised by an experienced gardener, soil samples analyzed, and the proper fertilizers applied. Last year an average of one ton of vegetables per garden was produced at a cost of $17.50 per garden for seeds, fertilizers, and insecticides. The garden supervisor estimates the retail value of the garden produce as $85 per garden. Close check on the improvement of the health status of the children of the demonstration garden families is being made.

REFERENCES

1. The Yearbook of Agriculture, "Food and Life", 1939, United States Department of Agriculture.
2. Annual Report of Director, Sparta Child Health Demonstration, 1941.

COMMUNITY PUBLIC HEALTH

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A definition of the term "public health" would be in order as a beginning, but these are legion and vary from short definitions of a single sentence to almost a whole printed page. Their content also varies to an amazing degree. To give a sample of each type of definition would alone fill the space and time allotted for this paper.

Definitions vary according to the viewpoint of the person defining the term. The ideas of the judge or lawyer differ from those of the physician; those of the business man from those of the public health engineer or nurse; the soldier from the civilian; and so on. There is often a difference in opinion of the private physician and the public health worker. For instance, the private physician sees the cause of tuberculosis in Koch's bacillus, but the public health physician sees the cause of Koch's bacillus in poor living conditions.

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Again, definitions differ depending upon the era in which they were made. When Paul Revere was elected chairman of the first board of health established in this country, public health meant the exercise of police authority in stopping an epidemic that had gained large proportions. This was the prevailing idea for many years after that time. In fact, the evidence tends to prove that this idea still prevails in some quarters, for today new automobile tires are available only to those public health workers whose duties are entirely in the enforcement of public health laws by the exercise of police authority.

But time changes all things, and public health policies and programs have been no exception to the rule. Since the organization of the first state board of health in Massachusetts in 1869, every state has its board of health, as has each major political subdivision of all civilized counties. These boards of health, with their enlarged staffs and increased numbers of bureaus or divisions, are ever on the watch to *prevent* epidemics, and are always embarrassed when called upon to stop one.

COMMUNITY HEALTH DEPARTMENTS

Since the organization of the first health department to serve an entire county in 1908, or in 1911, depending on acceptance of the claims of Kentucky, or of Washington and North Carolina, this service has increased to 1,669 counties having health departments as of June 30, 1941.

The original purpose of these local health departments was the control of epidemic infectious diseases, and the examination of school children for remedial defects and, where possible, to get these defects corrected. It was about this time that, in the South at least, the evolution of the "health officer" began. He had other duties than that of an "officer" or police, whose only duty was to institute and maintain quarantine. In Georgia, he officially became a commissioner of health, and was popularly known as the "school doctor", and the "doctor who gives shots."

Pretty soon it became evident that an efficient public health program could not remain a "solo" job, and it became a "duet"

when the public health nurse was added, and with the addition of a sanitary engineer, it became a "trio". In a big majority of our local departments it is still a "trio", but the average program is much more comprehensive than a few years ago. To the control of the common infectious diseases has been added a long-time program of control of tuberculosis and the venereal diseases. Maternal care for that class of mothers who must depend on a midwife for delivery, and who in the past had no prenatal care, is an important new work, and along with this an attempt to improve the midwife and her services. The child in the neglected age from 2 to 6 is receiving some attention. Sanitation of the schools and of private homes is being taught with more or less success. The health education program, for obvious reasons, was formerly confined very largely to school children. Its scope has been extended to include all ages.

These are only a few of the highlights in the "evolution" of "Community Public Health." History may record that the "revolution" in public health began with the passage of the Social Security Act by Congress in 1935. The insertion of two short paragraphs, known as Titles V and VI, to this bill, resulting in making available in the past five years of something over a hundred million dollars of Federal funds for public health, has truly revolutionized public health practice in the United States. This revolution has not only affected the extent of public health practice as to the area and population, but also the type and character of the services rendered.

Trained Public Health Workers

For many years the American Public Health Association, the American Medical Association, and others, have been urging better training standards for those engaged in public health. One of the first steps taken after the passage of the Social Security Act was the adoption of standards of qualifications for the different types of public health personnel by the Conference of State and Territorial Health Officers. These were approved by the U. S. Public Health Service and the U. S. Children's Bureau. The next was to make these standards attainable by opening new schools of public health, and by improving existing ones. Endowments or subsidies to these schools, and provision for the payment of stipend to acceptable men and women while in training, have to a large degree made the dreams of the American Public Health Association and the American Medical Association come true.

In 1935, 233 persons were employed in full-time public health work in Georgia, only a few of whom had had public health training. On Dec. 31, 1941, there were 544 persons so employed, only a very few of whom had *not* had special training for the public health positions they occupied. In addition, as of April 1 of this year, nearly 550 Georgia doctors engaged in private practice—you men—and many private duty nurses, were giving part of their time to the public health program, for which you received some remuneration, very meager though it was. But if the remuneration be small, the services are great and the results in less illnesses and fewer deaths are and will continue to be gratifying.

Negative versus Positive Public Health

Just here I shall give you probably the shortest definition of public health that has been given, as follows: "Public health is a term which includes all knowledge and all measures tending to *prevent disease* and *foster health*."[1] Please note the difference in the two objectives: *prevent disease*, and *foster health*. Surgeon General Thomas Parran says: "In our casual use of the word, we have been accustomed to think of health in the negative sense as the absence of pain or disease or obvious disablement. Yet if we check back to its Anglo-Saxon origin, *health* means something positive. It is wholeness. It is the addition to the norm of everything that makes life long and rich and productive."[2]

The prevention of communicable disease and obvious disablement is and must be classified as negative public health. No one would for a moment depreciate the value of this negative phase of public health. It has increased the span of life to such an extent as to make us often boastful. Many

scourges of humanity, such as smallpox, plague, yellow fever and others, have practically become memories, and others are rapidly fading away. Indications are that in the very near future many others will be conquered. It is great that through this negative public health program so many thousands of lives have been saved, and so many millions of days of lost time have been prevented. Certainly this program must be continued and enlarged. Sometime medicine and the allied sciences must and will find a way to prevent many, if not all, of the communicable diseases.

This negative or preventive phase of public health has been the main, if not the only, concern of the public health departments, and it is the desire of these departments that their programs continue to be confined to preventive medicine. But are we not now in a revolution that may, yes, will, demand the positive phase of public health? Can we, as physicians, fail to recognize the call, the demand, for health "wholeness", for that "addition to the norm" of those things that will make "life long and rich and productive"?

Tuberculosis and the venereal diseases are causing only a comparatively small per cent of the rejections of selectees, and the other communicable diseases none. Communicable diseases are not the only conditions that reduce the efficiency of workers in defense industries and on the farms. The undernourished or malnourished individual cannot be 100 per cent efficient. The arthritic or the cardiac has a productivity far less than normal. The alcoholic, the drug addict, or the mentally defective, if not totally non-productive, certainly is not efficient, and may even reduce the efficiency of his fellow-workers in that he may be the cause of accidents. Is there not a demand for a "positive" program that will "prevent" all of these? The nutritionist, the industrial hygienist, the mental hygienist, and the public health educationist, and others, must combine forces with us physicians to prevent these conditions.

Our present knowledge is not sufficient to eradicate all the conditions that prevent "wholeness". What then can be done for those who have remediable defects? Probably a better way to put this question would be: "What are *we* going to do about these?" For the demand for the rehabilitation of these people is loud, and must be heeded. Not only must the rejected selectee have his defects corrected when remediable, but others as well.

My plea is that we doctors face this problem and work out its solution as we have so many others. We can do it better than any other group, but if we do not tackle this problem now, others will; in fact, others already have.

The Farm Security Administration has selected about 15 counties in several states, one of them in Georgia, for a demonstration that a program of physical rehabilitation and medical care is practical. The program will be in operation within a few weeks in these counties. At present the program will include only the agricultural group, but if the results of this demonstration are found to be satisfactory in these few localities, and for this limited group, it is only natural that the program will be extended in area and to include all groups. Briefly, this plan is that each farmer will pay into a general fund a per cent (6) of his cash income for the previous year, to which is added Federal funds to bring the total up to a certain amount. This pool is split seven ways. Each family is allotted a certain amount annually for each of the following items: the general practitioner, surgical and specialist care, hospitalization, drugs, dental care, nursing care, and administration.

I have no criticism of the administration that has worked out these demonstrations to the best of its ability and with the best of intentions, but have we, the medical profession, given this group the benefit of our knowledge and experience in working out the program? Should we, as a profession, leave such an important program entirely in the hands of lay people? Has the medical profession, as a profession, ever presented a plan for this "wholeness" of living? Are we in position to accept the plans worked out by others? The challenge for a positive program for "wholeness" of life is ours!

REFERENCES

1. Hill, H. W.: The New Public Health, New York, The Macmillan Company, 1925.
2. Parran, Thomas: "Saving Health Among All Nations," Survey Graphic, pp. 151-153, (March) 1942.

TEACHING OF PUBLIC HEALTH IN A MEDICAL SCHOOL

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The teaching of public health in medical schools is of comparatively recent origin, and is still far from commensurate with the importance and our knowledge of the subject. Some of the factors contributing to this situation are: lack of funds to establish full-time departments; lack of hours in an already overcrowded four-year curriculum and lack of vision in some medical spheres to accept the trend in the direction of preventive medicine.

In 1927, Leathers[1] quoted Sedgwick as follows: "The medical school which fails today to provide also liberal instruction in preventive medicine, vital statistics, sanitary science, public health laboratory methods, preventive hygiene, such as mental, social, personal and dental hygiene, and public health education, and public health administration — that medical school is sending out its graduates unprepared for some of the most serious problems they will have to face in the immediate future. . . . That medical school which first begins this reformation will seize a golden opportunity."

In 1938 Munson[2] made the following remark: "Comparison of the announcements of the various medical schools in the United States and Canada indicates a wider divergence in the teaching of preventive medicine and public health with respect to nature, scope and time allotment than apparently exists in relation to any other subject included in the curriculum."

In 1939 Russell[3] stated: "Very little progress has been made in the last fifty years in developing a thoroughly satisfactory teaching program. According to surveys made by competent people, less than 20, or with higher standards, less than 10 medical schools give satisfactory courses in preventive medicine."

Fitzgerald[4] said in 1938, at the Annual Congress of Medical Education and Licensure: "With a few notable exceptions, medical schools had, in their teaching departments of hygiene, surely reached the low level mark of effectiveness, when in ten to fifteen hours' didactic lectures, some elementary principles of physics or chemistry were employed in demonstrating a few unimportant facts regarding our surroundings, clothing, food and drink."

What should be the objectives in the teaching of public health to undergraduate medical students? All authorities are agreed that it should not be designed as a specialty with the expectancy of making a health official out of the student upon graduation. This should be left to graduate instruction in one of the schools of public health established for such a purpose. On the other hand, it should serve as a background for those who wish to continue work in the graduate school; and to those who do not wish to enter the field as a career, it should serve to acquaint them with the problems they may expect to meet in their own state or community, and the mechanics whereby these problems are attacked. It will give them some idea as to the relationships of organized public health agencies; it will provide them with some knowledge of the socio-economic problems which frequently account for disease in the individual or en masse.

In recent years there has been an ever rapid and constantly expanding scope of state, city and county health departments, and other health agencies. Their operations are more standardized, and their personnel better qualified. Realizing the potential value of this wealth of resources, all authorities are agreed that it should be utilized as a means of medical student instruction, and in the majority of schools this plan is operating to a greater or lesser degree — usually lesser. More particularly do I feel this utilization should be the case with respect to state-supported medical schools. It could be made part and parcel of the state's health program.

Plan at the University of Georgia School of Medicine

It is worthy of note that in a survey made by Hiscock[5] in 1923, there were but four

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medical schools in the United States devoting more hours to public health instruction than the University of Georgia School of Medicine. During the recent critical period this program collapsed. Under the new regime the department has been reestablished, although now combined with that of bacteriology. The present set-up is not as complete as could be desired, but more satisfactory than in a number of schools.

Public health instruction is given in all four years of the curriculum. During the first year a series of didactic lectures is given and designed to introduce the student to the broader aspects of public health. Each student is assigned a topic upon which he reviews the literature and submits a term paper thereon.

An intensive course in bacteriology, parasitology and immunology is given in the second year. Interwoven and firmly stressed throughout is the matter of preventive medicine and public health.

There are three courses required in the third year. (1) Field Trips. This instruction is given in close cooperation with the local health department. The class visits, with a public health official where necessary, such establishments as water purification plants, dairy farms, pasteurizing plants — milk, butter, ice cream—canning factory, abattoir, Swift's packing plant, bakery, bottling plant, Veterans' Hospital (mental), malaria control projects — drainage, oiling and dusting. The students submit written reports, stating what they saw, giving criticisms. The remainder of the course is devoted to lectures on health problems of Georgia, and health department organization and administration in general, and is participated in by the State Health Commissioner, the director of district health units, and the heads of all the separate divisions of the State Health Department. (2) Dr. Eugene Murphey has given a series of lectures on the "Historical Development of Preventive Medicine." (3) Epidemiology. Students are assigned topics of a public health nature which are worked up for presentation to the class. General discussion follows.

In the fourth year small groups of students meet with the school physician, examining school children for physical defects. Weighing and measuring are done, Schick and tuberculin tests, toxoid, typhoid and smallpox immunizations are given. The tuberculin and Schick tests are read. The physical environmental qualities of school housing and sanitation are pointed out.

Realizing that a student learns more from what he does than from what he observes, the Department of Public Health of the Medical School, and the State Department of Health have worked out a plan — operating for the past two years — whereby those students of the junior class who wish to, may be assigned to some selected county health unit for ten weeks during the summer, and actively perform various duties in these units. Each student is paid an honorarium of $50 per month by the State for his services. The Rockefeller Foundation has felt this plan of sufficient merit to offer a few fellowships to our qualified students who wish to engage in this type of medical endeavor. The contemplated four-quarter system will undoubtedly interfere with these activities during the present emergency.

SUMMARY

1. The teaching of public health in a medical school should be placed in a full-time department with sufficient budget to meet its needs.
2. According to the 1941 survey only two schools in the United States are meeting the minimum requirements of the American Medical Association as to the number of hours of instruction in this field (4 per cent).
3. There is need for a greater utilization of the resources of organized health agencies as a means to practical application.
4. Teaching should be designed to furnish the student with a background which will serve him as a physician in his community, or as a stepping stone to public health as a career.

BIBLIOGRAPHY

1. Leathers, W. S.: J.A.M.A. 88:973, 1927.
2. Munson, E. L.: J. A. Am. M. Coll. 13:325, 1938.
3. Russell, F. F.: Ibid., 14:26, 1939.
4. Fitzgerald, J. G.: Proc. Ann. Cong. M. Educ. 1938, p. 19.
5. Hiscock, I.: J.A.M.A. 96:971, 1931.

PUBLIC HEALTH EDUCATION FOR LAYMEN

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In democracies, large-scale disease reduction cannot be accomplished without technical knowledge regarding control methods, the material means with which to apply these methods and popular cooperation. In turn, popular cooperation depends upon widespread awareness of the existence and the nature of the health problem, an appreciation of and a desire for the benefits of its solution and active approval of the project. Manifestations of the last range all the way from favorable group expressions at the ballot box to individual participation in the program. The development and dissemination of this sympathetic understanding and activation is the province of public health education.

Health education for the layman consists of those experiences influencing his knowledge, attitudes and practices by means of which his health and his neighbors' health are improved and maintained. The business of the professional health educator, therefore, is to provide health information, to establish favorable health viewpoints and to direct human behavior towards high standards of personal and community hygiene. He must do this effectively and economically. He must try to achieve these ends in competition with the stultifying influence of self-interest and self-satisfaction, with the false pretensions of commercial quackery and with the just claims and propaganda of other social improvement agencies.

Fortunately, he doesn't have to tackle the job alone. Health education is commonly visualized as a combination of two highly complementary activities, school health education and public health education. The first is concerned with teaching youngsters in school the principles and procedures of individual and group hygiene. This responsibility is recognized as belonging to educational rather than health agencies; it is usually carried on by school personnel. Public health education, on the other hand, is aimed at the same objectives but is planned primarily for adults. It is carried on in the home and in the community by agencies interested in promoting health. The success of the adult health education program is largely dependent upon the adequacy of the school health-education program.

In addition to the schools, the health educator has numerous other allies. Those closest to him in purpose and procedure are the members of the health department — the health doctor, nurse, sanitarian and divers health specialists each with his or her own particular field and technic of health instruction. To a large extent, it is upon these individuals that the burden falls of maintaining the continuity of the health educative process and of integrating it with other local health activities.

But in addition to these paid proponents of good health, there exists in the community a larger and more stabilized group, capable of exerting a powerful directive influence on the health viewpoints of the individual and the public. I refer to the private practitioners of medicine and, to a variable but usually lesser extent, visiting nurses, dentists, social welfare workers, home economists and other humanitarian agents who help educationally as they serve professionally.

It is often said that consciousness of a specific need creates the desire to learn. Certainly no one can be more keenly aware of health deficiencies nor more desirous of correcting them than sick persons. Next to wanting to become well as soon as possible, the patient is curious to know how he became ill and what he can do to avoid a repetition of the experience, or an extension of it to other members of his family. In answering these questions, the practicing physician has numerous and unparalleled opportunities to advance the health understanding of individuals and families and to insist, for the time being at least, on better health practices in the home.

In the community the medical profession has an equally important role in the guidance of group thinking and opinion on health questions. I have known county com-

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missioners to wait for endorsement by the local medical society of a proposed malaria-control drainage project before they were willing to give their approval. The attendance of physicians at health lectures, participation in the discussions which follow health movies, cooperation with local health programs — all tend to establish public confidence and interest in these activities. Indeed, the medical profession is the logical agency to take the initiative in bringing these facilities to the community. This is by no means disadvantageous to the doctor as it is well known that an aroused consciousness of the physical and economic benefits of good health leads to more frequent calls for medical service and to a more intelligent use of clinic and hospital facilities.

Frequently effective assistance to the health educator comes from lay citizens who have a strong sense of social responsibility. Sometimes these are public officials, sometimes they are prominent individuals in private walks of life. They may be banded together into civic service clubs, professional societies and their auxiliaries, parent-teacher associations and numerous other organizations. These people are valuable assets in any program of health education because they are "home folks." They are known to be solid, substantial members of the community. Their opinions will be seriously considered and, other things being equal, are much more likely to be accepted than those of outsiders; similarly, their practices will be imitated.

The cooperation of health personnel, the medical profession and enlightened lay leaders offers the most reasonable approach towards the development of an awakened public, concerned, informed and ready to take active steps towards the preservation and improvement of its health.

The content of health education today is legion. Years ago it consisted mainly of elementary anatomy and physiology — punctiliously neuter, dogmatic cautions against the use of tobacco and alcohol and dire warnings to violators of the sanitary code. Now it includes a comprehensive array of facts concerning the individual's physical welfare from before his birth until he dies. Specifically, modern health teaching provides information about prenatal care, infant and child hygiene, adequate dietary, dental hygiene, the cause and transmission of communicable diseases, how they may be prevented and controlled, environmental sanitation, life-lengthening suggestions regarding degenerative and malignant disease, safety rules, accident prevention, first aid and home nursing all based upon an unreserved understanding of the structure and function of our bodies.

While the media of health education are also diverse, its basic method is akin to that of commercial selling. The salesman deals with commodities and service; the health educator with improvements in human behavior from a health standpoint. In both the essential procedure is to prove to someone else that you can supply something he now lacks, convincing him that getting along without it is to his disadvantage — though he may not have realized it before — and that possession of it will result in a more abundant life, supporting these contentions with irrefutable evidence of their truth until his initial indifference is transformed into such a burning desire to own what you are offering that he takes active steps to acquire it.

While this comparison is imperfect in many regards, it is decidedly apt from the standpoint of objective. The salesman, living on his commissions, realizes full well that the act of selling has not been completed until his customer has been persuaded to buy and pay for the article he desires. Unfortunately, many health educators — and I use the term generically — are content to subsist professionally on their periodic summaries of literature given out, speeches made, movies shown, etc. They apparently fail to recognize that the distribution of health information is not the equivalent of health education, that the educative process has not been completed until human behavior has been modified in response to the motivation stimulus which effective health information should convey.

Here in Georgia we employ the traditional means of disseminating health facts. Briefly, these consist of the spoken word, the written word, exhibits of various kinds

and motion pictures. Concerning each of them I could present very respectable but tiresome statistical records proving their application in this State has been little short of astronomical in magnitude. Unfortunately, we have no objective measure of their effect, although we may be morally certain this is considerable. So I shall close by re-emphasizing my abiding conviction that lay health education has a big contribution to make towards the improvement of medical practice. Surgeons can accomplish infinitely more if their appendicitis patients come to them without catharsis; birth injuries and accidents can be prevented by prenatal examination; the chances of curing cancer depend largely upon early diagnosis; the physical rehabilitation of tuberculous individuals depends on early case-finding. The favorable development of these and a host of other medical procedures depends as much upon the health knowledge of the patient as upon the skill of the physician. The scale of their application will be directly proportional to the extent of organized and purposeful lay health education.

How is the busy practitioner to assist in the process? As pointed out above, by assuming leadership in health education if time and temperament permit him to do it; if not, by active cooperation with health and lay agencies in their health education efforts. A very special opportunity now exists in Georgia of assisting the Woman's Auxiliary to the Medical Association in its health-film program. These women are doing a splendid job in bringing to the layman health information in one of its most appealing forms. During the past six months they have shown movies to nearly 60,000 people in this State. But there is a definite limit to what they can accomplish without the participation of their husbands. Attend their meetings, interpret the films to the audiences in the light of their own reference background of information and comprehension; answer the questions that are always asked after a movie has been shown. You are the local authorities on medicine and good health and as such you have a responsibility to the community. Discharge it by making your learning and experience available to less fortunate individuals.

INDUSTRIAL HEALTH IN GEORGIA

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I have heard of a war poster with this message, "The only test for every decision —Will it help to win the war?" Reduction of lost time from preventable illness in industry *will* help to win the war. This is the most important war service that the medical profession can render to industry.

The Gallup poll has estimated that 23 million man days were lost to war industries or war-connected industries because of illness in December, 1941; and that this was enough labor to have built two heavy cruisers or 448 medium bombers, or 3,200 light tanks. Dr. Parran estimates that 20 per cent of industrial disability is preventable. It is the job of the Industrial Hygiene Service to lead the way in eliminating this 20 per cent. Donald Nelson is more interested in keeping the worker on the job than he is in providing treatment for preventable illness. There are 52 million workers in America today who are depending upon the services provided by the industrial hygiene movement to keep as many of them working at as many machines as many days as possible. The physician in industry today should be a health conservator as well as a health repair man.

A nearly perfect example of the maxim "an ounce of prevention is worth a pound of cure" occurred 88 years ago in London. In that year, 1854, at least 2,783 victims of cholera died in London alone. On Thursday, September 7, of that year, Dr. John Snow met with the Board of Guardians of St. James Parish. He presented evidence he had collected implicating the Broad Street pump as a source of the local outbreak. He had pieced this evidence together with inexorable logic, even though much of it was counter to prevailing medical opinion. He accurately postulated and described the natural history of a living "poison" as the specific cause of cholera, thirty years before

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Read before the Medical Association of Georgia, Augusta, April 29, 1942.

the cholera vibrio was first seen by Koch (1883). As a result of Dr. Snow's meeting with the board, the handle was removed from the Broad Street pump and the outbreak in that locality promptly subsided. Dr. John Snow by that action did more to safeguard the lives of millions from the risks of cholera infection than we can do even today by treatment alone.

Preventive medicine in industry is receiving increasing attention today from such organizations as the American Medical Association, the Public Health Service, the National Association of Manufacturers, the labor unions, the insurance companies, and many others. The Council on Industrial Health of the American Medical Association at its meeting in January, 1942, with the sub-committee of the Federal Security Agency, specifically emphasized the need for a program to acquaint the medical profession with the fundamentals of industrial medicine and designed to carry into effect the minimum standards set up to protect the health of employees. Their recent articles in the A. M. A. Journal should be read.

Industry itself is developing an awareness of the need for preventive medicine, and that such a program is economically sound. They have long known that it is good business to keep their machines in good repair. Many now realize that it is equally good business to take inventory of their man-power and keep it in the best possible physical condition. Productive capacity per man is just as important as productive capacity per machine. Mr. Andrew Fletcher, vice-president and treasurer of the St. Joseph Lead Company, has estimated that preventable absenteeism from illness costs his company over $70.00 per man per year, or $360,000 annually.

There are many medical problems in the industrial plant. Not only is the industrial worker exposed to the diseases and accidents common to us all, but in addition to the many hazards which are peculiar to the industrial environment. Even as he should be protected from tuberculosis, venereal diseases, nutritional deficiencies, etc., he is also entitled to protection from dusts, gases, fumes, vapors, mists, metallic poisons, mechanical injuries, burns, electric shock, harmful rays or emanations, harmful air pressures, temperatures, or humidities, skin irritants, or any other thing capable of producing preventable illness or injury.

We must not let our advances in knowledge of viruses and bacteria blind us to the many non-infectious causes of illness. Benzene vapors or silica dust can and do produce progressive diseases which are just as specific, whose symptoms are just as characteristic, whose diagnosis and treatment are just as intriguing, and whose prognosis may be just as deadly as any infection. Furthermore, study of these diseases makes one wonder how many of the blood dyscrasias and other diseases of unknown etiology may be chronic intoxications from contact with, ingestion of, or inhalation of harmful substances in the environment.

We all know that inhalation offers one of the most rapid and deadly portals for entry of toxic materials. HCN or H_2S by inhalation are deadly in a matter of minutes. Only 10 per cent or less of ingested lead is absorbed, but 90 per cent of inhaled lead fumes immediately enter the blood stream; and it is the lead in the circulation which is harmful in lead poisoning.

A disease recently encountered in Georgia of considerable interest to us has been called "cotton dust fever." We have seen several typical outbreaks, particularly in rural mattress project workers. In one outbreak, 80 workers were exposed to inhalation of dust from the offending cotton. All developed symptoms, varying in severity according to the concentration of the dust and the length of the exposure. The men were much more severely affected than were the women, but this was because they ran the extremely dusty fluffing machine, while the women prepared the ticking in a less dusty room.

Cough was the first symptom and the one common to all. In heavy dust cough developed within ten to fifteen minutes. Some men could not stay in heavy dust for more than an hour. Everyone who stayed two hours became ill with nausea, headache, sometimes vomiting, coryza, conjunctivitis, sore throat. A few hours later chills, fever up to 103° F., generalized aching, bone and

joint pains, prostration. The symptoms reached their maximum intensity in about 12-16 hours and then subsided, leaving the victim next day with a hang-over but no permanent residuals. Three of our patients lost consciousness at the time of their exposure but we have had no deaths. I have been told that there have been a few deaths in Alabama.

The research workers at the National Institute of Health have shown that the disease is an intoxication which occurs only when the cotton is infected with an aerobacter bacillus. This bacillus grows on and within the cotton fibers, and produces a toxin which is responsible for the disease in man.

The Industrial Hygiene Service of the State Health Department was organized last year. In collaboration with the Industrial Health Committee of the Medical Association of Georgia, it is prepared to offer specialized service in the diagnosis and control of illness in industry. Personnel have been employed who are qualified in the special fields of medicine, nursing, engineering, and chemistry. An industrial hygiene laboratory has been outfitted in the State Office Building, with the finest equipment available. Samples of some of the field equipment for air-measurements, dust counts, and combustible gas determinations are on display at our exhibit booth at this meeting. A reference library with a trained librarian has been started and standard texts, periodicals, and reprints on all phases of industrial hygiene are being collected.

The Industrial Hygiene Service brings to industry all the facilities of the Health Department for the control of all preventable illnesses, whether of occupational or non-occupational origin. Included are the divisions of Preventable Diseases, Tuberculosis Control, Venereal Disease Control, Malaria and Hookworm Service, Maternal and Child Health, Public Health Engineering, Public Health Nursing, Public Health Education, Local Health Organizations, Vital Statistics, and the Laboratory.

An example of the extent and effectiveness of these services was illustrated in a recent explosive water-borne epidemic of typhoid fever and dysentery in a Georgia cotton mill. There were 80 primary cases of typhoid and 79 cases of bacillary dysentery. The State Health Department supplied 4 doctors, 7 nurses, and 2 engineers. Over 1,200 laboratory examinations were made. The epidemic was promptly controlled. There have been no secondary cases. although without active control measures the danger of food, milk, or fly-borne secondary cases is great. Twenty carriers of typhoid are still under observation. Every case of typhoid reported anywhere in Georgia this year has been investigated to determine any possible connection with this outbreak. Hundreds of potential secondary cases have been prevented. However, the four deaths and the many hundreds of man-days of disability and suffering should be a lesson to us all, for all of this could have been prevented.

The State Board of Health has adopted a regulation concerning the reporting and investigating of occupational diseases. It is the duty of each physician to report occupational diseases in the same manner as he reports other reportable diseases. The bulletin, "Occupation Hazards and Diagnostic Signs," is the official guide to aid in diagnosis and nomenclature. Copies of the regulation and the bulletin will be distributed to all physicians in the State. Those who desire may obtain their copy at our booth. An outline of the services available to industry is also obtainable.

The most effective health programs in industry provide the following services:

1. PRE-EMPLOYMENT EXAMINATIONS of all applicants including chest X-ray and blood test for syphilis. Aptitude tests are also recommended. Each applicant should be assigned to an occupation in accordance with his physical and mental capabilities.

2. PERIODIC EXAMINATIONS including special medical and laboratory studies indicated as a result of exposure to specific hazards. Frequency of these examinations varies depending upon the type of exposure. If signs of toxicity are found, the worker should be reassigned to work not dangerous to him. The origin of his exposure should be investigated and control devices installed wherever possible.

3. LUNCH ROOMS on a cooperative basis with trained dietitians to provide and teach the fundamentals of a balanced diet.

4. REST PERIODS to relieve fatigue, and provide relaxation and refreshment.

5. COMMUNICABLE DISEASE CONTROL MEAS-

URES preferably in cooperation with the local health department.

6. NURSING FOLLOW-UP of all absenteeism from illness.

7. ABSENTEEISM RECORDS for all employees. The British Medical Association lays great stress on the importance of sickness records. They maintain that they are the basis of all industrial health research. By medical supervision coupled with sickness records, British firms have been able to reduce the sickness of their employees to a half or a third of the national average. Again a study of sickness records may lead to a discovery of important occupational hazards which have hitherto escaped notice. We have available a sample absenteeism record form which yields accurate statistical information with a minimum of effort.

8. SURVEYS (medical and engineering) to discover sanitary and occupational hazards and provide a basis for control measures.

9. ENGINEERING CONTROL MEASURES such as general ventilation, local exhaust, enclosed processes, wet methods, substitution of non-toxic materials, protective clothing, other protective equipment, adequate lighting, etc.

10. HEALTH EDUCATION through talks, movies, posters, pamphlets. Pay envelope distribution is effective.

11. REHABILITATION SERVICE. Suitably trained cripples make reliable workers, and become more stable employees than the so-called physically perfect group.

To sum up the duties of the medical profession in our war effort, may I quote the inspired words of Surgeon General Parran, spoken to the American Medical Association. "There are historic moments in the life of every nation as in the life of every individual. This is such a moment. We have passed the twilight of a day that is gone. One by one the lights of liberty have been extinguished in many lands. Few lights remain. But for America a new day is dawning. For it we shall need all the health and courage we can muster. We must be conscious of our destiny, of a potential power which no nation has ever held. How well we use it now may determine the course of our history. Our part — yours and mine — is to work as a united profession toward building our nation's strength. Our nation expects much of us. We shall not fail."

BIBLIOGRAPHY

1. Foulger, John H.: Industrial Exposure to Toxic Chemicals—A Scheme for its Medical Control, J.A.M.A. (Sept. 6) 1941.
2. Parran, Thomas: The Functions of Public Health in Defense, J.A.M.A. (July 19) 1941.
3. Goltz, E. V.: Physical Examinations in Industry, Industrial Medicine, No. 4, 11:181 (April) 1942.
4. Snow on Cholera, The Commonwealth Fund.
5. Sedgwick: Principles of Sanitary Science and the Public Health.
6. Rosenau, M. J.: Preventive Medicine and Hygiene.
7. Seeger, Stanley J.: Education in Industrial Health, J.A.M.A., 118:1017 (March 21) 1942.
8. Harvey, Verne K.: Recent Trends in Physical Examinations Under Civil Service, J.A.M.A. 118:597 (Feb. 21) 1942.
9. Parran, Thomas: War Time Problems of the Public Health Service, J.A.M.A. 118:1033 (March 28) 1942.
10. Physicians in Industry, J.A.M.A. 118:900 (March 14) 1942.
11. Papers read at the Sixth Annual Meeting of the Industrial Hygiene Foundation held at the Mellon Institute, Pittsburgh (Nov. 12) 1941.
 Lanza, A. J.: What's New in Industrial Health.
 Jones, R. R.: A Plan for Protecting Health of Top Executives.
 Walter, M. M.: Employability of the Physically Handicapped.
 Kessler, H. H.: Employability of the Physically Handicapped.
 Baehr, George: Protection of Civilians and Industry in Wartime.
 Gafafer, W. M.: Sick Absenteeism in Industry.
 Fletcher, Andrew: St. Joseph Lead Company, What the Results of Absenteeism Audit Mean in Dollars and Cents and Suggestions for Lessening Absenteeism.

PUBLIC HEALTH AND NATIONAL DEFENSE

J. D. APPLEWHITE, M.D.
Macon

Now that our nation is engaged in war it is necessary that every resource at our disposal be properly utilized that the conflict be brought to a successful conclusion. The greatest asset that we have is our manpower and it is essential that all of our governmental agencies provide, on a cooperative basis, funds for the development of programs designed to protect and preserve the health of our civilian and military populations.

The medical profession is looked to for guidance and leadership in the development of public health programs and it is certain that now we are willing to give our best efforts to maintain the health of our people at the highest possible level.

During the past twelve to fifteen months changes have occurred in our country which have in many respects magnified our public health problems. By reason of increasing our efforts for defense, we have seen a vast shift in population. First, by workers going to areas where defense industries and military camps were being constructed, to seek employment; and second, the induction of selective service men into the military forces for training.

The increase in population of some centers has been enormous and the individuals making up this increase have come from

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widely scattered areas of the country. This has created in some areas serious housing problems, thus causing overcrowding and the increased contact infections that necessarily go with it. That serious results might not develop, it has been necessary for some communities to develop housing programs so that the increased population might be properly taken care of. In addition to the construction of houses other facilities had to be provided, such as the extension of water supplies to the areas, sanitary sewers or a substitute for sewers, that we might not have outbreaks of intestinal-borne diseases, such as have been experienced in the past when such facilities were not provided.

All of this has possibly put a considerable strain upon the resources of some communities and, where adequate facilities have not been provided, we must ever be on the alert to prevent the development of serious health hazards.

In connection with this great shift in our population it is well for us to keep in mind at all times the possibility of the transmission of diseases that are endemic in certain areas, to others, where the population is non-immune, thus causing epidemics. This can easily occur by carriers and mild cases.

We must ever keep such possibilities in mind and be prepared to meet such situations should they arise. During last summer we saw a rather extensive outbreak of poliomyelitis in our section of the country, an outbreak greater than we have ever experienced. While there is no proof, the possibility exists that there may have been some connection between this occurrence and the bringing into our section of the country thousands of selective service men from New England to be trained in military posts located here. Poliomyelitis is endemic in New England and it is possible that many of these trainees were carriers of the infection.

This same problem must also be ever kept in mind in connection with our military forces who will be transferred to foreign service, and especially to those who go into the tropics. The importation of tropical diseases is an ever-present possibility and our federal authorities are aware of this and will exert every means at their disposal to avert it.

Attention must be given to certain environmental factors in all of our public health efforts. The provision of safe water supplies and safe means of waste disposal at all homes and places where our forces go for recreation and amusement are essential.

The protection of food supplies and regulations for the operation of establishments where food is prepared and dispensed to the public is important. Without rigid regulations there will be a tendency for many inferior places to spring up, which are likely to be public health hazards.

In any public health program it is essential that supervision be given to the milk supply. Milk is a required part of the diet of our military forces and perhaps should be of the civilian population. It is one of the foods capable of transmitting disease and every precaution possible must be taken to safeguard it. In some areas, before defense projects were brought in communities, there was barely enough milk to supply the demand, so that it became necessary to enlarge the area from which the supply came. This has necessarily handicapped local personnel in that their efforts had to be extended to cover the increased distances entailed by this larger area. In this program it is essential that we ask the State and Federal authorities to give assistance.

In this section of the country we must give attention to certain of the insect-borne diseases, especially malaria and endemic typhus fever. Mosquito control in defense areas is being undertaken by the U. S. Public Health Service, but local authorities have definite responsibilities in the areas outside the limits being supervised by Federal authorities. In the control of endemic typhus fever measures must be directed to the control of rats.

One of the most important, as well as difficult, problems is that of control of the venereal diseases. These diseases cause more disability in our military forces than any other infection aside from the common respiratory diseases. This probably is true for the same age groups in civil life. For any control program to be effective, there must be the closest cooperation between local health and police authorities and where

there are military forces stationed they must also have a part in the control program.

The Federal Government is extremely interested in the control of these infections and the War and Navy Departments, the Federal Security Agency, and state health officers have pledged themselves as follows in regard to the control of the venereal diseases:

"Decrease as far as possible the opportunities for contacts with infected persons. The local police department is responsible for the repression of commercialized and clandestine prostitution. The local health department, the State Health Department, the Public Health Service, the Army, and the Navy will cooperate with the local police authorities in repressing prostitution."

In this program the individual physician has a definite responsibility. He must see that each patient who comes to him for care is given adequate treatment, and make every effort to determine the source of the infection.

By finding the source of disease and getting the ones responsible for its spread under treatment, greater progress in its control will necessarily follow. The enormity of this problem is indicated by the fact that 13 per cent of selective service men examined in Georgia so far have syphilis.

During the past forty years there has been a great decline in the morbidity and mortality from tuberculosis. We must not become negligent however in our programs against this problem, because it is still a problem of considerable magnitude. In some of our highly industrialized centers there has been an upward trend in the mortality from this cause during the past two years. In the event we have a lowering of our standards of living it will be necessary that all our present efforts be intensified in order to prevent this becoming the great menace it once was.

The efforts that have been made to conserve the public health have been effective as shown by the decline in our mortality rate during the past quarter century. We must recognize the fact that there are still many sections in which there is no organized community effort being made to conserve the public health. We must not be satisfied until this service is extended to protect the entire population of our country. In this extension the medical profession will take the lead.

As public health is of paramount importance to the community, the State and the nation, it is logical that all of these agencies cooperate in developing and maintaining programs designed for the common good.

THE ORGANIZED CANCER CLINIC AND STATE-AID IN GEORGIA

G. T. BERNARD, M.D.
Augusta

> Son of man, speak to the children of thy people and say — Whosoever heareth the sound of the trumpet, and taketh not warning; if the sword should come and take him away, his blood shall be upon his own head. But if the watchman see the sword come, and blow not the trumpet, and the people be not warned; if the sword come and take any person from among them, that person's blood will I require at the watchman's hand!

These were the compelling words which gripped the prophet Ezekiel. His was the task of warning the people of impending judgments. When he foresaw the coming of the destructive sword he was to blow the warning trumpet.

On the walls of modern civilization stand the members of the medical profession. They, too, are trumpeters and they dare not shun their responsibility to warn their fellowman of any impending physical judgment. As the first symptoms of a terrible disease such as cancer appear, every doctor needs to blow his warning trumpet — not once, but again and again. During 1941 more than 153,000 individuals in the United States died from cancer.

How many of these could have been saved if the doctor first consulted had made a careful examination and given the proper advice?

The above paragraphs are part of a letter written by Dr. J. L. Campbell, of Atlanta, our chairman of the State Cancer Commission, which letter was sent to every member of our Association last February.

This letter is similar in tone to many,

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many pieces of literature that we have received from various sources over the past twenty-five years. The letter implies that at this time patients do not report early enough and that doctors are not diligent enough in making an early diagnosis and that as a result a vast number of people lose their lives to cancer and that many of them could have been saved. The reasons, therefore, are two in number.

1. The lay public still lack education about cancer and, therefore, do not seek advice early.
2. Doctors are not alert as to the early signs and symptoms of cancer and early effective treatment is not given.

It is now fifty years since Dr. Halsted gave to the world his radical mastectomy, and with it the promise to all women, that if they would apply for treatment for cancer of the breast when the growth was limited to the breast and if his operation was carried out, that four out of five of these women would be free from any evidence of the disease five years after the operation. This promise has been made good and today even higher than 80 per cent of cures are obtained, but only in these selected cases. In February of this year Dr. Clarence Cohn of Baltimore, speaking before the Richmond County Medical Society, at Augusta, gave his mortality records in a large series of cases. Well over 80 per cent of five-year cures was attained for the early cancers limited to the breast. However, the curability for the whole group, early, moderately advanced and late, yielded the miserable result of only 13 per cent of the five-year cures. This illustrates the fact that both the public and profession are not living up to the possibilities of present-day treatment.

To overcome these two obstructions to progress and cancer control, namely, indifference and ignorance on the part of the laity, and failure on the part of the profession to utilize all of the modern methods of diagnosis and treatment that have been made available during the past quarter century, I point to the year 1913 as marking the two most momentous events that have occurred in the organized fight against cancer — two events that are slowly but surely winning the battle against the two factors mentioned above: lack of information among the public, and lack of co-ordination on the part of physicians. These two events were:

1. The organization of the American Society for the Control of Cancer, concerning itself mainly with the dissemination of information regarding cancer. It was from this organization that the public has been taught that cancer must be fought with knowledge and that early cancer can be cured.
2. The American College of Surgeons, also organized in 1913, which almost at once took an active interest in cancer, and has collaborated with the American Society for the Control of Cancer in every way. One of the earliest activities of the college was the establishment of the Committee on the Treatment of Malignant Diseases by Surgery, Radium and X-ray. This committee is now known as the Cancer Committee, and it occupies an important place on the college program of elevating the standards of hospitals and the practice of surgery.

In 1929 a committee for the American Society composed of Drs. Ewing, Greenough and Gerster reported to their directors on the "medical service available for cancer patients in the United States." As a result of this report, Dr. Greenough and Dr. Bowman C. Crowell conceived the idea of encouraging the establishment of cancer clinics in general hospitals. How successful was this idea is proved by the fact that at the last annual meeting of the American College of Surgeons, in November, 1941, approval was given to 376 cancer clinics.

The purpose of the cancer clinic is to give to each patient group study; that is, the joint study of every case by a number of men, each representing some special line of work; and the group should include a surgeon, radiologist, pathologist and as many others as may be available. It is manifest that this group can render more efficient service than any one man working alone. Indeed, the scope of cancer is so vast, its ramifications and complexities so great and its treatment so varied that no one man, no matter how versatile, could ever hope to master the whole subject of diagnosis and treatment.

The time has come when the term "cancer specialist" is a misnomer. Indeed, he is an impossibility; that is, if we mean that he is competent to deal single-handed with all problems of cancer. For how could any man be an accomplished surgeon, a skilled

pathologist, a radiologist and a radium therapist? And yet the cancer patient should have the benefit of all the above. In fact, the subject of cancer has become so great and work in this field has become so specialized and refined that at Memorial Hospital, New York City, young men entering service there are given a general understanding of cancer but are encouraged to concentrate their efforts on just one phase of cancer or just one region of the body.

Let me say here and now that to render good service in cancer work no man must belong to a cancer clinic. We remember that Dr. Halsted made his notable contribution before there were any cancer clinics. And surely there are many men capable of performing all the routine and standardized operations of cancer surgery. With this ability and with the consultations of other specialists available, just as good work can be done as is done in any clinic. Indeed, it amounts to the same thing.

But we must remember that cancer is an expensive disease and specialists and consultations cost more than many patients can afford. All these things are for rich and well-to-do people who are able to pay for the best, and in this way they get the best. But the clinics I know have not been organized for rich people, but for the great mass of poor people, or those so moderately circumstanced that any attempt on their part to pay the cost of a major cancer illness would result in family bankruptcy. It is for these people that the cancer clinic attempts to give the best that medicine and surgery have to offer in its particular community.

Dr. Crowell in a paper entitled "Twenty-five Years' Work on the Cancer Problem," says this:

"Were I to be asked the greatest contribution already mede by this movement for the formation of cancer clinics my reply would be the realization on the part of the profession of the necessity for cooperation between surgeon, pathologist, radiologist and internist in order to arrive at an accurate diagnosis and to outline effective treatment. The completeness of the follow-up and the accuracy of records will be of value to future cancer patients. The meetings of the members of the cancer clinic staff, offering as they do, opportunity for experience and interchange of ideas, constitute a valuable educational feature for the profession."

In Georgia there has been a ready response to the need of organized cancer clinics. The American College of Surgeons has shown us the way. A minimum standard has been laid down, explaining what equipment is necessary, what constitutes a proper staff, how conferences are to be conducted, provision for proper records and the necessary follow-up of treated patients. If any clinic will meet these minimum requirements, then the college will place this clinic on its approved list, which means that all the world will know that in this clinic patients will receive competent diagnosis and treatment.

In Augusta our clinic dates back to 1922, but for a long time it was not organized. Patients with cancer were treated and I believe a certain amount of good was done. But x-ray and radium equipment were below par, there were no staff meetings, no secretary, no proper records and no follow-up.

But in 1929, when the American College pointed the way, Dr. Goodrich, dean of the Medical College, and Dr. Lentz, superintendent of the University Hospital, authorized the organization of a cancer clinic. From our small nucleus this organization was effected and we at once began to aspire to the approved list of clinics. This was attained in 1938.

There are now twelve cancer clinics in Georgia; six are approved and six have not yet been approved, but all are doing splendid work in cancer control. Each of these clinics has its own story of aspiration, struggle and achievement. Some day these stories may make an interesting chapter in the history of Georgia medicine.

From the very beginning our own clinic has prospered. Our progress has never been spectacular; it has been slow, but its growth has been steady. There have been plenty of difficulties, but in some way they have always been overcome. One of our chief troubles has been the extreme difficulty or downright inability of out-of-the county patients to pay for their keep in the hospital, if hospitalization was necessary in the conduct of their treatment. Augusta and Richmond County have always paid and continue

to pay the expenses of our own indigent patients and our clinic was organized primarily to care for these, our home folks. But as the clinic grew it naturally attracted people from a distance, many from counties having no hospitals. It was a most difficult and, at times, heart-sickening task to get them into the hospital. But here again another stumbling block was to be removed. For long years we have known of the untiring work of Dr. Campbell and our Cancer Commission in getting a Cancer Law enacted in Georgia and a State appropriation of funds for the care of cancer patients. We know that this is an accomplished fact and patients from the entire State are now sent to the various clinics with no cost to themselves. Since the organization of state-aid every patient sent to our clinic has been cared for and every cent expended on the care of these patients has been paid.

It is difficult for me to express my feelings of approval and appreciation of our State-Aid Cancer Control Service and its admirable administration under the State Board of Health. Its smooth running and freedom from red tape have brought a uniform feeling of good will between the doctors at large, the clinic staffs and the hospitals concerned.

A few years ago a very distinguished gentleman paid a visit to our cancer conference: Dr. Francis Carter Wood, director of the Institute of Cancer Research of Columbia University. We had a good variety of cases and among them there was presented a case of advanced cancer of the cervix. The history brought out all the miserable details. A woman of fifty, mother of eight children, passed the menopause and then a little spotting and bleeding, terminating in profuse bleeding after a year. Examination revealed a far advanced carcinoma, probably hopeless. The case was presented with a feeling of shame and some misgivings as to what our visitor would think of us here in Georgia. Dr. Wood discussed this case. He said, "It is regrettable that we have such cases, but we do. Don't be discouraged that you have them in Augusta. We have them in New York, in Chicago, in Boston, and I expect all over the world. It is only an index of our backwardness in managing cancer."

But Dr. Wood went on to say this: "I have enjoyed my visit here today. I know that Georgia is a poor state, that it has no very rich people and no heavily endowed institutions. But when I see this large number of patients and the character of the work done, I think it is swell."

And this is what he saw: Our clinic staff, pathologist, radiologist, radium therapist, professor of surgery, medicine and the other specialists, many of our very best men, men who are interested in medicine and especially interested in cancer, coming together on Monday, the busiest day of the week; putting aside all their private interests and giving their time to the charity cancer patients. And when I think of these men and their devotion to this cause, giving their time, their work and in many instances their money, I, too, think it is swell.

Let us look at the record: Last year — Georgia a poor State — spent $78,000 for the diagnosis and treatment of cancer through state-aid clinics.

Two thousand and ten new patients received diagnostic and treatment services, 1,596 patients suffering with cancer were cared for.

Surely this is an impressive number of helpless people suffering from a dread disease and given their chance for life.

Our people are called on to pay ever-increasing taxes, to do without this, that and the other things that make for comfort and convenience. We do all this gladly and are prepared for our country's sake to do even more, but do we not feel a sense of pride that our State is actuated by the highest altruistic motives in supplying this money for our helpless cancer victims?

And as for the doctors, these men who man the clinics, all are giving of their best. Are they not living up to the finest traditions of medicine? And in the Cancer Control work of Georgia are we not all honoring our God, serving our country and, incidentally, are we not reflecting credit on our profession?

STATE-AID ACTIVITIES IN GEORGIA—1941

1. There are twelve cancer clinics operating at the present time under the state-aid program as follows:

Augusta, Sheffield, Winship, Macon, Columbus, Thomasville, Americus, Canton, Dalton, LaGrange, Savannah and Waycross. Of the twelve clinics the first six are approved by the American College of Surgeons.

2. During the calendar year 1941, $78,826.15 were expended for the diagnosis and treatment of patients referred to the state-aid cancer clinics.
3. During 1941 the total number of patients receiving diagnostic and treatment service for the first time amounted to 2,010. Of this number 1,272 were found to be malignant, 703 non-malignant and in 35 cases the diagnosis was deferred. In addition, there were 324 patients with cancer upon whom treatment was started prior to January 1, and who received treatment during 1941.
4. Bills were paid during 1941 for the treatment of 1,551 patients with cancer at an average cost of $42.83. Bills were paid for diagnostic service on 506 non-malignant cases at an average cost of $24.49.
5. These averages are based on the number of patients for whom bills were paid. In addition, 277 patients were given service at the clinics without cost to the State. If these were averaged in with the total, the above figures would be somewhat lower.

DISCUSSION OF SYMPOSIUM ON PUBLIC HEALTH PROBLEMS

Dr. Frank K. Boland (Atlanta): I wish to make a few remarks on the paper of Dr. Abercrombie on nutrition. For some time I have been interested in studying the question as to why Negroes do not have such diseases as peptic ulcer, gallbladder disease and appendicitis as frequently as do white people. Recently we made a study in Atlanta to determine just what the relative incidence of these diseases is in the two races. In the metropolitan area, covering 550,000 inhabitants, we found over a period of the past five years that peptic ulcer and appendicitis were eight times as common among white people as among Negroes and that gallbladder disease was fifteen times as common. Gathering my statistics from a paper written by McCarrison in 1921, I got the idea that this difference in incidence was in a part, at least, due to vitamin deficiencies. I have been taught all my life that probably racial pecu'iarities have something to do with the incidence of certain diseases in certain races, but it has been proved, I think, by McCarrison and by men working among Eskimos that certain diseases which do not exist among people when they are living in their .normal place and eating their normal diet, do occur when they move away from home and eat what is eaten in other places.

I believe over-preparation and preservation of food, transportation of food and the saving of food which becomes necessary in the contingencies of modern civilization, rob or impair foods of their vitamins and I believe our Public Health Departments would render great service to the people if they could teach them to plant gardens where they could get plenty of fresh vegetables instead of becoming so proficient in the use of the can opener. Canning was first invented by Appert in the early 1800's at the instigation of Napoleon who was fond of saying that an army travelled on its stomach. There was very little preservation of food before that time. Salting food destroys its vitamins and Napoleon thought it would be much better, which it would be, to have food preserved in its juices and its natural flavor. He stimulated Appert to work out a way of saving food that way, which he did.

Since Reginald Fitz first wrote on appendicitis in 1886, the question has often been asked how long appendicitis had existed before that time. I believe our forefathers in medicine who lived 150 years ago, while they had no instruments of precision as we have today for making diagnoses, still were intelligent men and good observers and if there had been any great number of cases of appendicitis then some of these men would have recognized them and written about them, which they did not. It was about the time that the canning of food began that we began to have these diseases. Reliable laboratories report that canning either destroys or lessens the vitamin content of food. It is necessary to cook food before it is canned and after the can is opened the food is cooked again, and this double cooking impairs the vitamin content.

I believe, Dr. Abercrombie, if your department would teach more of this doctrine and teach people to raise more food around their homes and gardens and in communities where they live and not depend so much upon canned food or foods preserved by other means, that it would add very much to the health of the State.

Dr. Lee Howard (Savannah): I want to say a word about the educational possibilities that we have through the increasing attendance and efficiency of our State-aid cancer clinics. While our clinic in Savannah is a small one, during the past year we have seen and have under treatment 23 new cases of carcinoma of the cervix, more than a busy gynecologist would ordinarily see in the course of a year. When Dr. Charles Waltman, of the American College of Surgeons, recently visited our clinic, I was surprised to hear him say that it was not necessary, as we had thought, to have all the physical facilities for diagnosis and treatment on hand in order to have an efficient cancer clinic. He said that he had found well operated clinics in court houses and other places, as well as in large general hospitals. That encouraged us a lot in Savannah, where we have no large general hospital but several small ones with varying equipment. Through the sponsorship and efforts of the Georgia Medical Society (Chatham County), we have established the cancer clinic in our new Health Center Building, where all of our free medical services and the City-County Health Departments are located and coordinated. If you have an interested attending staff to meet and see the clinic applicants, as a group, the educational advantages for the profession, as I see it, are considerable. With an increase in applicants, a variety of cases will soon be available for study. For our Savannah clinic, the number of applicants for the past six months, has doubled that of the previous six months.

Our staff organization is entirely democratic and open to all members of the local medical society. I have

insisted that doctors, who have seen cases and worked them up, bring them to the clinic rather than send them. I believe if this practice was more general throughout the State, that many of us, through seeing all the cases assembled at one of these clinics, would learn more about the diagnosis and treatment of cancer and certainly find it most interesting.

I thank you.

Dr. J. L. Campbell (Atlanta): I want to congratulate all the essayists, for they have persented a splendid group of papers. Any one of them would afford ample opportunity for a discussion that would consume the time allotted for the entire group.

This symposium covers one of the most important fields of modern medicine. While I am interested in all phases of public health, my greatest interest is in cancer control because for years I have given much time to it. However, we have not yet achieved our full goal. If we could only have sufficient money at our disposal I really believe we could prevent a large percentage of the deaths from cancer and very much of the morbidity, because cancer can be prevented.

This symposium proves beyond all doubt the value of education in the control of disease. If short courses of study could be established in every rural community so that all strata of society—landlords, tenants, and farm hands—could be induced to realize the value of (1) nutrition, (2) home sanitation, (3) early medical care and proper nursing, and (4) proper methods of food crop cultivation, soil conservation, etc., the next few generations would see the red old hills of Georgia bloom forth like the delta of the Mississippi.

These subjects have been so well discussed that it would be presumption on my part to try to amplify any of them. However, I will say a few words on the possibility of preventing cancer hy the early recognition of those lesions which we call precancerous.

I am convinced that cancer of the mouth can be prevented by the proper care of the teeth and by the moderate use of tobacco: being sure that the lips and tongue are not burned by the pipestem or cigarette, that the "chew" of tobacco and the "snuff stick" are shifted frequently from side to side. If possible, artificial teeth should be made to fit properly or else all abrasions caused by them should be carefully watched and properly treated.

Cancer of the skin can undoubtedly be prevented. Flat black moles can be removed before they become malignant and keratoses—known precancer lesions—can be properly treated.

Cancer of the cervix can be prevented if we can only persuade women who have borne children to have frequent examinations of the genital canal and to have any excoriation or ulcer thoroughly cauterized. The procedure is not a painful one and does not require hospitalization.

At the present time we do not have, to the best of my knowledge, any means of detecting early visceral cancer, much less any means of preventing it.

Our State cancer control law is well administered and literally thousands of people unable to pay for treatment are receiving it at public expense. There are twelve well organized cancer treatment centers in the State. They are so well located that it is not a burden to the people to reach them for the initial treatment and the follow-up which is as necessary as the first visit.

The Georgia cancer control work has received national recognition. Six of our State-aid clinics in general hospitals and eight of the fourteen cancer diagnostic and treatment centers are fully approved by the American College of Surgeons. All of the twelve clinics on the list of the Department of Public Health are doing good work; but, owing to the necessary location of some of them in smaller communities, they lack the services of a resident pathologist and, therefore, cannot he given full approval. In every other respect they measure up to requirements.

Dr. Abercrombie is giving the Division of Cancer Control all the cooperation in his power and, within the next few years, some valuahle statistics will have been accumulated and made available to the medical profession and the public throughout the country.

I cannot close this discussion without a word of praise for the Georgia Division of the Women's Field Army. These women have done valiant work among all classes of people. They have cooperated with the medical profession and not a single time have I heard of any one of them breaking their pledge to refrain from recommending any individual or institution.

Dr. C. K. Wall (Thomasville): First thing, I want to take my hat off to Dr. Campbell, one of the grandest old men in Georgia medicine. He has done more work to publicize cancer treatment and saved the lives of more women than anybody in Georgia that I think of right now. He has worked untiringly on cancer for the last twenty years, to my certain knowledge, and probably a long time before that. I think it is due primarily to Dr. Campbell's efforts that we have the present set of cancer clinics. He did the pioneer work and the rest of us came along and brought it up to date. I am in the cancer clinic in Thomasville and while I have no figures on the clinic census, we have done a great deal of work and are doing more and more all the time.

I am sorry Dr. Harrold of Macon is not here. He makes a good cancer talk and I always like to hear him. It is too bad that the doctors who most need to know about the cancer clinics and what is being done in them are the ones who usually do not attend these meetings. For their own good reasons they find it difficult to come to the State meetings and miss the gist of the reports on cancer work. Many of them have patients who are eligible for the cancer clinic where they would get real help but who are left at home to suffer for lack of information on the part of the doctors. With the present set-up of cancer clinics in the State and our present knowledge of cancer and its early treatment a great many lives could be saved with just a little good advice at the right time. So many women, especially in the so-called cancer age, consult their family physician complaining of irregular bleeding periods and the doctors are all too often prone to pass it up as due to

"change of life." These women, instead of being given careful and intelligent pelvic examinations, are all too often given some uterine sedative and told that the condition would clear up. Like hell it will! That patient will die as a result of that doctor not giving her some good honest advice. If he would get up out of his swivel chair and find out what is wrong or if he doesn't know, send the patient to somebody who will find out, more progress would be made. I am not maligning our doctors, but rather trying to wake them up. Actually, what doctors need to do is to wake up to the danger our cancer patients are facing.

I am mighty glad to see a larger percentage of precancerous cases coming for biopsy. Any woman with a lump in her breast certainly deserves a biopsy. The Women's Field Army to fight cancer is, I think, one of the most active forces in fighting cancer today. They are putting on talks before parent-teacher associations. They are telling women about cancer and women are becoming cancer conscious.

I am also glad to see larger numbers of private patients coming to cancer clinics for examination and advice. They don't ask for charity treatment but they want an intelligent diagnosis which is denied them at home.

Again I want to say: "Hats off to the cancer clinics and to Dr. Campbell as pioneer."

Dr. B. H. Minchew (Waycross): My interest in public health is dated from the beginning of private practice. I soon learned the truth of the paradox—the doctor is most successful financially if he practices in a healthy community. Accidents and diseases incident to a resourceful, prosperous and healthy community permit the physician to receive pay for his services to much higher percentage than if his efforts are given to a community where epidemics and preventable diseases are permitted to develop. The physicians of course must take the leadership in promoting public health programs, but in doing so he must convince the business man and industrialist that public health is a concern of both the physician and the business man. It can be shown definitely that business pays for a neglected health program. It is simply a process of the survival of the fittest paying the bill. The obligations arising out of an epidemic or an unhealthy community pyramids itself to the group who can and must pay the bill, and we must convince the layman that this is his problem whether he consents to it or has a knowledge of it.

I was impressed a few days ago at an address of Mr. J. P. Culpepper, of Alapaha, Ga., President of the Georgia Bankers' Association, when he stated that he recognized much of our economic problem in Georgia was due to preventable disease. He stated that every fourth patron of his bank as a borrower had a debt of $100 every three years as result of some crisis in his family resulting from disease. The most pleasing part of his address was his recommendation to his colleagues, the members of the Georgia Bankers' Association, that they should assist in a program of public health in the communities in which they lived.

I feel that Dr. Abercrombie can assist this far-seeing business man if he will instruct him how best such a program can be developed from the standpoint of the Bankers' Association in cooperation with our State Department of Health.

WARNS OF NERVOUS AND MENTAL EFFECTS OF SULFONAMIDE DRUGS

Physician Says Manner in Which They Affect Bacteria May Be an Integral Part of Their Effect on Cells, Bacterial and Human

An admonishment that it is possible that the synthesis of new and more powerful derivatives of sulfanilamide will be brought to a standstill by the disappointing discovery that the more toxic or poisonous these drugs are to bacteria the more toxic they are to the human cell, is made by Sam C. Little, M.D., Ann Arbor, Mich., in *The Journal of the American Medical Association* for June 6.

Dr. Little says that it now is generally agreed that the mode of action of the sulfonamide drugs is bacteriostatic (inhibiting growth) and that it is now unlikely that many of the toxic effects are an integral part of the effect of the drugs on cells, whether bacterial or human.

"Animal experiments seem to indicate that all members of the sulfonamide group have a toxic effect on the nervous system, the parent substance, sulfanilamide being the least toxic, and some of the newer derivatives being the most toxic," he says. "A review of the clinical reports, in general, confirms the results of the animal experiments. The drugs appear to be more neurotoxic [poisonous to the nervous system] in the presence of preexisting disease of the nervous system. The following abnormal conditions have been reported as due to the use of the sulfonamides: dysmorphosia [distorted vision], aphasia [loss of expression by speech, writing or signs or of comprehending spoken or written language], agraphia [inability to express thoughts in writing], stammering, toxic psychosis, peripheral neutritis [inflammation of the nerves of the skin], encephalomyelitis [inflammation of the brain and spinal cord], myelitis [inflammation of bone marrow], optic neuritis [inflammation of the nerves of the eye], transitory myopia [nearsightedness], meningeal signs [of the membrane enveloping the brain and spinal cord], blindness and convulsions."

DEATH FROM USE OF HOME TREATMENT ELECTRICAL DEVICE

"Any sort of self treatment by electric devices—home made or procured from unscrupulous manufacturers or their sales agents—may cause death by electrocution when applied by inexperienced and unskilled lay persons," Richard Kovacs, M.D., New York, warns in *The Journal of the American Medical Association* for June 6.

Dr. Kovacs' admonishment is contained in a report on a Long Island, N. Y., clergyman who was found dead in his room, a victim of an attempt to treat pain in the back of his neck with a violet ray machine. Undoubtedly he had "grounded" the machine in the mistaken belief that by so doing he would increase the strength of the current and thus the efficiency of treatment.

THE PRESIDENT'S PAGE

THE DOCTOR

"There are men and classes of men that stand above the common herd: the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing."—Robert Louis Stevenson, Preface to "Underwoods."

"A doctor easily becomes a sensitive plant that is badly hurt if you question its infallibility. The doctors, for the most part are a kindly and sympathetic crowd. Most of them do more charity work than any other class of men, but occasionally there is one who will let a woman die in a labor case unless some one will guarantee the fee. Their duties and the calls made upon them render it impossible for them to be of much help in church matters beyond paying in money. They are uniformly kind to the ministry. I have never paid but one doctor bill in these fifty years."—Bascom Anthony, D.D., "Fifty Years in the Ministry."

"What this country has got to do is to retain the good and valuable services which lawyers and doctors have to give; and this can only be done by making them attaches of the State, and putting them on salaries.

"The doctors must find it to their interest to destroy their business. They must keep the people well and show them how to banish the demons of disease. We must fix the doctor's ideal on health, happiness and usefulness, and take his gaze off the warts, tumors and inflamed appendices. People who live rightly are well; and it is for the doctor to show us how to keep well and this he will do when he thrives through health and not through our disabilities."—Elbert Hubbard II, "The Note Book of Elbert Hubbard."

Quotations might be continued at length but the above are sufficient to indicate that doctors are normal human beings after all. At times they approach the ideal and sometimes fall by the wayside. Perhaps the same could be said of all groups of peoples. Maybe we do stand above the crowd when our fellowmen lie suffering from ills we know how to relieve and cure. However, we are trained to do this and it is expected of us.

I believe doctors are as unselfish now as they were fifty years ago. The reason they may not always appear so is due to the fact that the practice of medicine is very expensive now compared to a period when doctors "read medicine", bought a book, a few instruments and were set up for life. The cost of living was so small until few people suffered from want. It was customary for doctors to respond to all calls and render treatment without presenting bills. Some doctors took pride in declaring that they were poor business men. Even now a few doctors take pride in stating that they never ask patients for money. This is not only unfair to their families and patients but it is also unjust to fellow practitioners. If you want to serve best your patients, your families and yourselves apply accepted standard business rules along with proper medical knowledge and kindness.

It is honest to admit that doctors used to do all the charity practice without aid, partly because it helped both doctors and their patients. Finally the simple way of living grew complex and want, hunger, disease and distress overcame so many of our people until doctors needed and received help from public funds and donations from both selfish and unselfish people.

It was perfectly natural for individuals to clamor for rights and privileges in the administration of these funds. Elbert Hubbard declared frankly in favor of salaried medicine years ago.

Changes in the practice of medicine have brought wonderful improvements for patients, doctors and nurses. Hospitals and public health with their many benefits come from public funds and private donations. The work of doctors is just as essential as funds and working tools. If progress continues the voices of workers must maintain influence and leadership.

J. A. Redfearn, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia
478 Peachtree Street, N. E., Atlanta, Ga.
JULY, 1942

EDUCATION, KNOWLEDGE, AND PUBLIC HEALTH

"My people are destroyed for lack of knowledge; because thou hast rejected knowledge I will reject thee."[1] All through ancient times the value of knowledge is emphasized, but nowhere more than by the Hebrew prophets.

"A very considerable part of our fighting and productive force is the direct result of reduced mortality since the beginning of the century; and this in turn is to be credited to our organized public health effort and the remarkable advance of medical science in the past decade."[2] This is the result of education.

At the last meeting of the Medical Association of Georgia members who are public health minded presented a symposium showing that the greatest need now existing to further and perfect our health program is *education* and *knowledge*. The individual efforts and the responsibility of the State in executing the measures that apply to health were fully discussed and emphasized.

Among the individual responsibilities are home sanitation, proper nutrition for growing children, and better medical care and nursing during sickness. Many trivial illnesses develop into serious conditions due to a lack of knowledge.

It is through education and hard work that we have attained our present standards of public health efficiency. We have overcome many obstacles that appeared insurmountable; but there are yet many weary miles to travel and hard tasks to be performed before we reach the desired goal.

A century and a half ago it looked as if diseases that we now know are preventable would destroy life from off our planet. However, thoughtful men, endowed by nature with zeal and determination, saw a vision of freedom from these enemies of the race. Out of this vision Edward Jenner developed vaccination against smallpox. Years later Pasteur, Koch, and others acquired the knowledge that disease is caused by bacteria, and they found ways and means of prevention. The inspiration spread and one by one contagious and infectious diseases are being conquered.

Our seaport cities and industries are no longer closed during the heat of summer. Our people are no longer tormented by the fear of an invading pestilence. They no longer leave home and seek refuge in mountain resorts, anxiously to await daily news from those compelled to remain at home that the dread epidemic has "broken out." All these blessings are the result of knowledge obtained through public health teaching. We hope the day is not far distant when all persons in every community of Georgia, including the low income group of our citizenry, can have the advantages of health, education, home sanitation and food production.

Further illustration of the value of knowledge and health education is the fact that among some groups of citizens in this country the death rate has been reduced slightly more than 50 per cent in the last twenty-five years. The young child has been the greatest beneficiary. Not only have lives in this age group been saved, but morbidity resulting from the "diseases of childhood" has been greatly reduced.[3]

We are glad to see that more and more attention is being focused on the prevention of venereal diseases. It is hard to convince a young man that a single night of dissipation may mar his whole life and the lives of generations yet unborn. Therefore, prevention and early diagnosis should be the watch word.

The conquering weapon is *knowledge through public health education.*

J. L. CAMPBELL, M.D.

REFERENCES

1. Book of Hosea, chap. iv, 6.
2. Statistical Bulletin, Metropolitan Life Insurance Co., Vol. 23, No. 2, Feb., 1942.
3. Statistical Bulletin, Metropolitan Life Insurance Co., Vol. 23, No. 3, March, 1942.

The JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

JAMES EDGAR PAULLIN, PRESIDENT-ELECT

James E. Paullin, who was chairman of the Council on Scientific Assembly and whose term would have expired next year, has been chosen President-Elect of the American Medical Association. He was born at Fort Gaines, Ga., on Nov. 3, 1881, and graduated from Mercer University in 1900, where he also took postgraduate work. After getting his M.D. degree at Johns Hopkins in 1905 he served as resident pathologist at Rhode Island Hospital, Providence. From 1906 to 1911 he served as pathologist of the Georgia State Board of Health and later on the faculties of the Atlanta College of Physicians and Surgeons, Atlanta Medical College and Emory University. He was a major in the Medical Corps of the Army in 1918 and 1919. He is retiring president of the American College of Physicians, is a member of the board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians and was recently decorated with the Order of Carlos Finlay by the president of Cuba. He has held office in various societies, is a member of Sigma Nu and Phi Chi, and has been a contributor to current medical literature.

—American Medical Association, Daily Bulletin, Ninety-Third Annual Session, Atlantic City, June 12, 1942.



James Edgar Paullin, M.D., *Atlanta*

CAT.

PRESIDENT-ELECT PAULLIN

The selection of Dr. James Edgar Paullin, of Atlanta, as president-elect of the American Medical Association will be welcomed by his associates in his profession and by the public he has so ably served. In elevating him to the high place of president-elect, the medical association has recognized Dr. Paullin's skill, wide experience and successful practice. His fellow citizens will look upon the honor with genuine community pride and pleasure.

A native of Fort Gaines, Georgia, Dr. Paullin is a graduate of Mercer University. He received his medical degree from Johns Hopkins University and interned at the Rhode Island Hospital in Providence and the Piedmont Hospital in Atlanta. His career since then includes pathologist, State Board of Health, 1906-11; associate professor pathology, Atlanta College of Physicians and Surgeons, 1907-11; associate visiting physician, Grady Hospital, 1909-13; professor of medicine, Atlanta Medical College, 1913-15; professor of clinical medicine at Emory University and chief of medicine, Emory University division of Grady Hospital; major, Medical Corps, U. S. A., 1918-19. He is a member of the American Medical Association, Southern Medical Association, American Clinical and Climatological Society and Association of American Physicians. He has served as president of the Medical Association of Georgia and of the Fulton County Medical Society.

Atlanta and Georgia are justly proud of Dr. Paullin. This new honor that has come to him has been worthily won and will be becomingly worn.

—Editorial, The Atlanta Journal, Atlanta, June 13, 1942.

COMMUNICATION

Concerning Georgians as President of the American Medical Association

Dr. Edgar D. Shanks,
Atlanta, Georgia.

I am just in receipt of your note requesting the names of presidents of the American Medical Association from Georgia other than Doctor Paullin.

According to our records, Dr. H. F. Campbell of Georgia was president in 1885, and I do not find that any other doctor from Georgia served as president of the American Medical Association prior to Doctor Paullin's service.

I note that you mention that one of the "Eves of Augusta" was president "way back befo' de wah." Our records show that at the time that Doctor Eve was president of the American Medical Association he was from Tennessee, and our records further show that in 1848 Dr. Paul F. Eve, who was then of Georgia, was elected third vice-president of the American Medical Association.

A list of the annual sessions and of the presidents of the American Medical Association is contained on pages 15 and 16 in the Sixteenth Edition of the American Medical Directory.

With my sincere thanks for your good wishes and with my sincere good wishes to you.

OLIN WEST, M.D., *Secretary*
American Medical Association.

June 14, 1942.
Chicago, Illinois.

MEDICAL ASSOCIATION OF GEORGIA

NINETY-FOURTH ANNUAL SESSION

Atlanta

May 11, 12, 13, 14, 1943

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Cancer Commission

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Lee Howard Savannah
A. J. Mooney, Sr. Statesboro
A. D. Little Thomasville
R. F. Wheat Bainbridge
R. C. Pendergrass Americus
W. F. Jenkins Columbus
Kenneth Hunt Griffin
Enoch Callaway LaGrange
E. L. Bishop Atlanta
J. J. Clark Atlanta
C. C. Harrold Macon
N. J. Newsome Sandersville
David L. Wood Dalton
Z. V. Johnston Calhoun
W. F. Reavis Waycross
S. T. R. Revell Louisville
H. M. McKemie Albany
Hartwell Joiner Gainesville
W. H. Roberts Augusta
H. E. Talmadge Athens
A. H. Hilsman Alhany

Executive Committee, Women's Field Army of the American Society for the Control of Cancer

J. L. Campbell, Chairman Atlanta
E. L. Bishop Atlanta
J. J. Clark Atlanta
Robert C. Pendergrass Americus
Enoch Callaway LaGrange
C. C. Harrold Macon
T. F. Abercrombie Atlanta
J. V. Rogers Cairo

Orthopedics

Fred G. Hodgson, Chairman Atlanta
T. P. Goodwyn Atlanta
H. M. Michel Augusta
F. Bert Brown Savannah
J. Hiram Kite Atlanta
L. H. Muse Atlanta
C. H. Watt Thomasville
F. K. Neill Albany

Ophthalmology

Grady E. Clay, Chairman Atlanta
S. J. Lewis Augusta
E. N. Maner Savannah
Francis B. Blackmar Columbus
H. M. Moore Thomasville
J. R. Childs Atlanta
Herschel C. Crawford Atlanta
I. W. Irvin Albany

Syphilis

Harold P. McDonald, Chairman Atlanta
J. T. McCall Rome
Roy R. Kracke Emory University
J. Z. McDaniel Augusta
Willis P. Jordan Columbus
Wallace Bazemore Macon
John C. Keaton Albany

Harry Righton Savannah
R. F. Wheat Bainbridge
L. W. Pierce Waycross
Hartwell Joiner Gainesville
R. H. McDonald Newnan
P. L. Hilsman Albany

Industrial Health

Jno. W. Simmons, Chairman Brunswick
Thos. P. Goodwyn Atlanta
B. H. Minchew Waycross
C. W. Roberts Atlanta
L. M. Petrie Atlanta
C. F. Holton Savannah
W. W. Battey Augusta
W. W. Chrisman Macon
A. N. Dykes Columbus
J. P. Tye Albany
R. E. Newberry Atlanta

Clinical Pathology

A. J. Ayers, Chairman Atlanta
Roy R. Kracke Emory University
Walter W. Daniel Atlanta
A. R. Rozar Macon
D. R. Venable Columbus
R. Lee Rogers Gainesville
Alex R. Freeman Albany

ADVISORY

Student Loan Fund

Mrs. H. G. Banister, Chairman Ila
G. Lombard Kelly Augusta
R. H. Oppenheimer Atlanta

Tuberculosis

C. C. Aven, Chairman Atlanta
Champneys H. Holmes Atlanta
Enoch Callaway LaGrange
H. C. Schenck Atlanta
C. D. Whelchel Gainesville
W. C. Cook Columbus
R. F. McGahee Augusta
E. F. Wahl Thomasville
R. V. Martin Savannah
C. M. Sharp Alto
H. C. Atkinson Macon
Warren Gilbert Rome

Scientific Exhibit

W. F. Hamilton, Co-Chairman Augusta
Francis Parker, Co-Chairman Emory University
Robert Drane Savannah
Lee Howard Savannah
B. E. Collins Waycross
Joseph Yampolsky Atlanta
Wm. F. Lake Atlanta
Edgar R. Pund Augusta
John E. Walker Columbus
Helen W. Bellhouse Thomasville
R. N. Johnson Rome
W. S. Cook Albany

ADVISORY

Woman's Auxiliary

Jas. N. Brawner, Chairman Atlanta
Eustace A. Allen Atlanta
C. D. Bowdoin Atlanta
Olin S. Weaver Macon
A. S. Bacon Albany
J. Lon King Macon

Medical Preparedness

W. A. Selman, Chairman Atlanta
Jno. B. Fitts Atlanta
Edgar D. Shanks, Secretary-Treasurer Atlanta

Post-Graduate Study

G. Lombard Kelly, Chairman Augusta
Russell H. Oppenheimer Emory University
Richard Torpin Augusta
Olin S. Cofer Atlanta
H. C. Sauls Atlanta
Roy A. Hill Thomasville
W. F. Reavis Waycross
S. P. Kenyon Dawson
R. D. McKenzie Albany

Georgia State Medical Association (Negro)

M. T. Harrison, Chairman Atlanta
W. E. Story Columbus
R. C. Maddox Rome
J. F. Hanson Macon
H. H. Allen Decatur

Pediatrics

W. W. Anderson, Chairman Atlanta
A. J. Waring Savannah
Frank Schley Columbus
M. M. McCord Rome

Appendicitis

T. C. Davison, Chairman Atlanta
J. K. Quattlebaum Savannah
Charley K. Wall Thomasville
J. C. Patterson Cuthbert
Fred F. Rudder Atlanta
F. B. Rawlings Sandersville
B. Lester Harbin Rome
Kenneth McCullough Waycross
R. L. Rogers Gainesville
S. D. Brown Royston
Enoch Callaway LaGrange
W. M. Field Albany
S. E. Sanchez Barwick

Awards

Wm. R. Dancy, Chairman Savannah
T. S. Gatewood Americus
Mather M. McCord Rome
Ralph H. Chaney Augusta
W. F. Reavis Waycross
T. C. Williams Valdosta

Maternal Mortality and Infant Deaths

H. F. Sharpley, Jr., Chairman Savannah
C. B. Upshaw Atlanta
Richard Torpin Augusta

I. M. Lucas.....Albany
David M. Wolfe.....Atlanta

National Youth Administration

C. L. Ayers, Chairman.....Toccoa
Shelley C. Davis.....Atlanta
T. F. Abercrombie.....Atlanta
M. C. Pruitt.....Atlanta
Frank E. Thomas.....Albany

FRATERNAL DELEGATES TO OTHER STATE MEETINGS

Alabama: J. R. Paulk, Moultrie; Don F. Cathcart, Atlanta; and John E. Walker, Columbus.

Florida: E. F. Wahl, Thomasville; W. F. Reavis, Waycross; and M. E. Winchester, Brunswick.

North Carolina: Allen H. Bunce, Atlanta; Pratt Cheek, Gainesville; and C. M. Sharp, Alto.

South Carolina: G. Lombard Kelly, Augusta; Ralph H. Chaney, Augusta; and J. Cox Wall, Eastman.

Tennessee: Z. V. Johnston, Calhoun; S. A. Kirkland, Atlanta; and W. F. Wells, Atlanta.

STATE BOARD OF MEDICAL EXAMINERS

Steve P. Kenyon, President.....Dawson
L. G. Neal, Vice-President.....Cleveland
Harold P. McDonald.....Atlanta
Hulett H. Askew.....Atlanta
M. B. Copeloff.....Atlanta
R. F. Wheat.....Bainbridge
J. P. Palmer.....Ailey
Geo. A. Ward.....Elberton
H. G. Huey.....Homerville
Cleveland Thompson.....Millen

STATE BOARD OF HEALTH*

First District: J. C. Metts, Savannah, Sept. 1, 1945.
Second District: C. K. Sharp, Arlington, Sept. 1, 1945.
Third District: Mr. R. C. Ellis, Americus, Sept. 1, 1942.
Fourth District: J. A. Corry, Barnesville, Sept. 1, 1943.
Fifth District: Mr. Robt. F. Maddox, Atlanta, Sept. 1, 1942.
Sixth District: C. L. Ridley, Macon, Sept. 1, 1944.
Seventh District: W. P. Harbin, Jr., Rome, Sept. 1, 1944.
Eighth District: Henry W. Clements, Adel, Sept. 1, 1944.
Ninth District: Robt. L. Rogers, Gainesville, Sept. 1, 1945.
Tenth District: D. N. Thompson, Elberton, Sept. 1, 1943.

*Nominated by their respective district medical societies and appointed for six year terms.

STATE OF GEORGIA AT LARGE

W. K. White, Savannah, Sept. 1, 1945.
J. G. Williams, Atlanta, Sept. 1, 1945.

*Nominated by the Georgia Dental Association.

*Pharmaceutical Association**

M. D. Hodges, Marietta, Sept. 1, 1941.
John W. White, Thomasville, Sept. 1, 1947.

*Nominated by the Georgia Pharmaceutical Association.

HOUSE OF DELEGATES

SYNOPSIS OF PROCEEDINGS

Ninety-Third Annual Session

MEDICAL ASSOCIATION OF GEORGIA

Augusta

April 28, 29, 30 - May 1, 1942

PRESIDENT'S REPORT: Dr. Allen H. Bunce, president, gave a useful report on the duties of the House of Delegates and the responsibilities of its members. We have been diligent to foster the scientific work of the Association and have been quick to employ new discoveries, and he cautioned that dangers and limitations may lie ahead. Urged home study and research work; friendly intercourse among physicians in the same locality should be promoted: all should utilize their abilities and the facilities of their local communities, county commissioners, city councils and others to provide funds to care for the indigent sick. Counties have courthouses, jails, schools and churches, then why not clinics and hospitals? Physician owners of private hospitals have done noble pioneer work and often at a great sacrifice; counties should render more efficient service in funds and hospitals and the physicians should concentrate on this effort to arouse public officers to action. Georgia, with the largest area of any state east of the Mississippi River, has in many places a scattered physician population who are unable to hold county society meetings to any advantage, therefore the necessity of having active district societies and semi-annual meetings.

Membership in the American Medical Association costs us nothing; it is composed of members from the state and territorial associations; it is too big to conduct meetings all together, then delegates are elected to represent its members in the House of Delegates. The delegates elect officers, fix terms of offices, change the Constitution and By-Laws and transact such other business as may be necessary to promote the interests of the profession. This Association must have men and women to carry on its work. The officers and members of committees are practitioners and teachers of medicine and surgery scattered throughout the United States. They serve without pay. Some of these committees are called councils, as the Council on Pharmacy and Chemistry, the Council on Medical Education and Hospitals, and others; but all exist with our approval. We agree on the objects of the Association but not always in the method of obtaining them. The president and secretary are each elected for one year; delegates are elected for two years; members of the Board of Trustees for five years, with a limit of two terms. In our headquarters we have one officer, Secretary Olin West, and over 600 loyal workers. We keep in close contact with the secretary.

Our visual education program has flourished since our last annual session with the help and cooperation of the State Department of Public Health and the Woman's Auxiliary. The $5,000 appropriated at our last session to buy picture machines with other equipment for each of our Councilors has and will continue to pay good dividends in health education.

Plans have been made to establish a Benevolent Fund

for our indigent members with the appropriation of $5,000, which should have additional funds added from year-to-year which may be allocated from dues. It is a noble cause and should have active support.

The officers and committees were thanked for their tireless and efficient work and cooperation.

It is recommended that the Council hold a meeting as early as convenient after the annual session to which the secretaries of district societies be urged to attend. The purpose should be to discuss the condition of the profession in each county and arrange dates for meetings, so there will be no conflict in meeting dates and plan the improvement of the educational program, also to do our part in the war and post-war work. That the Council fix regular dates for annual meetings probably in the winter so as to carry out the large volume of work assigned to it. That district societies prepare their programs at least 60 days in advance of each meeting so that they may be published in THE JOURNAL.

PRESIDENT-ELECT: Dr. J. A. Redfearn, president-elect, reported that he visited many district and other society meetings. He stressed the importance of members attending medical meetings and not to get into that habit of "stay at home." That our retiring president has urged repeatedly that we support organized medicine "since it accounts largely for our locations, properties, friends, wives and children." We receive more from organized medicine than we put into it. That our president-elect will discuss nutritional needs in Georgia during his term of office in addition to the duty we owe our country. The necessity of preventive medicine is increased as members from our ranks are called to the colors. National publicity has aroused nation-wide interest. To quote from General Lewis B. Hershey, deputy director of Selective Service, the "physical status of American youth is shameful." One-third are unfit for full service and malnutrition heads the lists of causes. "The State Department of Public Health has available for your distribution valuable leaflets entitled, 'Buy Your Vitamins in Foods.'" One-third of the population cannot pay for vitamin prescriptions. Information in reference to nutritional needs and tuberculosis should be distributed. Teach Georgians how to grow essential foods; a balanced diet prevents disease; much has been done through preventive medicine and more is to be accomplished. "Tuberculosis is one major disease which has been inadequately handled." The State Department of Public Health states that a million people in Georgia will show a positive tuberculin test and that the State Tuberculosis Sanatorium can only treat about ten per cent of the treatable patients. Many medical organizations have advised us that tuberculosis wards in our hospitals would solve the problem economically. "Homes for incurables are separate needs to stop the spread of tuberculosis." Many hospitals in the United States have installed wards for tuberculosis patients. You should assume leadership and establish them in Georgia. Your suggestions will be appreciated and the call for your assistance will be sent out frequently.

SECRETARY-TREASURER: Dr. Edgar D. Shanks, secretary-treasurer, reported that the official membership of the Association was 1897; that 1510 members had been reported for 1942; that cash on hand and bonds amounted to $36,688.59 (various property of the Association is not included in the cash and bond accounts). The Benevolent Fund will require more funds for active service for our indigent members (The Illinois plan with a few changes will be used by our officers to set up and operate the Benevolent Fund). The fund will be handled direct on recommendations of county medical societies to the Executive Committee. The Public Relations Bureau disbursed $5,112.75 for its program which included the purchase of ten moving picture machines, sound films and various other equipment which have been supplied to each of our ten Councilors. They are being used for visual education by the Councilors and district managers of the Woman's Auxiliary. Films were purchased to augment the film library of the State Department of Public Health which helps and cooperates with the Association. Ninety-two films have been shown to 358,000 people during the past year. Visual health education is acceptable to our people. Therefore, I recommend that the Council appropriate $2,000 for this work during the fiscal year. More than 130 health articles have been mailed to 226 newspapers in the State. We were fortunate to have anticipated our requirements for stationery and to have a favorable contract with the printers which would be almost, if not, impossible to secure at this time.

FIRST VICE PRESIDENT: Did not submit report.

SECOND VICE PRESIDENT: Did not submit report.

PARLIAMENTARIAN: Dr. Jno. W. Simmons, parliamentarian, reported that he had been consulted a number of times during the year by the Secretary-Treasurer and others and that he had gone beyond his jurisdiction to help those who had called upon him. He advised that the Constitution and By-Laws covered almost, if not, every contingency, or with a few changes could be made to cover any situation which might arise.

ARRANGEMENTS: Dr. S. J. Lewis, general chairman, reported the schedule of entertainments which included special luncheons and banquet.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION: Dr. Olin H. Weaver, delegate, reported that there were 118,441 members and 72,504 fellows in the A. M. A., which is the largest membership ever recorded. Since Georgia has a smaller percentage of fellows according to the number of doctors than most states, other physicians in Georgia were urged to become fellows to at least bring our number of fellows up to the equal of other states, if not higher. For 1940, the A.M.A. had a total income of $1,876,353.80, expenses paid were $1,688,585.50 with a net income of $187,768.30. It has 636 people employed. Interesting addresses were made by the officers which showed the great influence wielded by this organization. The officers and committees have numerous duties to perform and the demands on their time are unusually great. The Code of Ethics of the American Medical Association should govern the actions of physicians but it is not a law. It was urged that students in medical schools and members of the faculties should not be depleted to where the scarcity of physicians would place undue hardships on the people. In the trial of the A. M. A., et al, for violation of the

Sherman Antitrust Act, the A. M. A. and the Medical Society of the District of Columbia were found guilty. The A. M. A. was fined $2,500; and the Medical Society of the D. C. $1,500. The judgment of the court will be appealed. The scientific meetings and exhibit carried great and varied interest. Strong commendation in reference to Dr. Wm. H. Myers, deceased former delegate, was read into the record. Dr. Weaver paid a high tribute to Dr. C. W. Roberts, a retiring delegate to assume duties as a member of the Board of Trustees. The President countered with a dignified compliment to Dr. Weaver.

HOUSE OF DELEGATES OF THE MEDICAL ASSOCIATION OF GEORGIA: Reference Committee No. 1 reviewed the minutes of the House of Delegates during the Macon session in 1941 and reported that they were factually correct and properly recorded.

CHAIRMAN OF COUNCIL: Dr. W. A. Selman, chairman, reported that one called meeting had been held for the purpose of making provisions for the disbursement of the Benevolent Fund. On motion by the Secretary-Treasurer, the plan of the Illinois State Medical Society was adopted with certain modifications. While being chairman of the Council and Councilor of the Fifth District, he reported that Mrs. Selman and Mrs. Jeff L. Richardson had done excellent work for him by promoting visual health education and showing films on public health, nutrition, tuberculosis, cancer, child welfare and many others.

SCIENTIFIC WORK: Dr. Wm. R. Dancy, chairman, made a report on the scientific section of the program which was adopted as the official program of the ninety-third annual session.

HISTORY—SUB-COMMITTEE: Dr. Frank K. Boland, chairman, reported that the Committee did not get the help from the members it deserved to complete the Medical History of Georgia; the work has been long drawn out because the members of the Sub-Committee were all active practitioners and did not have the time to pursue the work as they may wish for. The Committee wishes to prepare the copy for publication at an early date to submit to the officers of the Association. The difficulty is that we do not have a full-time historian.

MEDICAL ECONOMICS: Dr. B. T. Beasley, chairman, reported that one meeting had been held and urged the Surgeon General of the Fourth Corps Area to select physicians for military service from sections where there might be the least inconvenience to the people in a particular community. It was pointed out that in cities of 10,000 population or more that there was an average of one doctor to every 519 population while in the rural sections there were only one doctor to every 1,642 people. There is a possibility of an extreme shortage of physicians in the cities which already exists in the country. The question of contract practice should be referred to the Council where there is any doubt as to the ethics. It was urged to make some provisions for the indigent through the Farm Security Administration and provide for some more equitable distribution of doctors. Make some plan for medical service for the indigent in Georgia which will conform to those of the American Medical Association, and that copies of the program to provide medical care for the clients of the Farm Security Administration be mailed to every practicing doctor in Georgia.

MEDICAL DEFENSE: Dr. Marion C. Pruitt, chairman, reported that the committee was first organized and put in operation in 1916 and that it had continuously kept an attorney employed since that time. Suggested that no physician criticize the work of any other doctor because all have at one time or another bad results. When a member is charged with malpractice, contact the chairman of the Committee or the Secretary-Treasurer. Do not make a statement without the advice of our attorney and do not employ an attorney.

PUBLIC POLICY AND LEGISLATION: Dr. Spencer A. Kirkland, chairman, reported on funds which are included for health work in the Deficiency Bill of the Federal Government in addition to funds appropriated for the continuous work of the U. S. Public Health Service. The funds are to be used for control of venereal diseases, emergency health and sanitation, training of nurses and sanitary investigators, and malaria control. Congress should be urged to include paregoric on the prescription list; that a bill be passed to put service men in World War No. 2 in the same class with veterans of World War No. 1 for hospitalization and medical care; that licensed pharmacists dispense the drugs supplied by governmental agencies; that provisions be made for the inspection of sea food; that chiropractors be eliminated by the government for the treatment under the U. S. Employees' Compensation Act; chiropractors propose to raise their standard; that is, by Federal laws to govern their practice for the Government. Medicine plays an important role at this time and it is the intention of the medical profession to keep the health of the armed forces at the highest degree of efficiency.

CALHOUN LECTURESHIP: Dr. James E. Paullin, chairman, reported that $127.40 had been collected from dividends and interest; that $71.75 was paid for expenses of an invited guest at the 1941 session and that a net balance of $952.65 was on hand.

CANCER COMMISSION: Dr. J. L. Campbell, chairman, made his usual report of most excellent service rendered in cooperation with the State Department of Public Health and the State Division of the Women's Field Army of the American Society for the Control of Cancer. Several meetings with the Advisory Committee have been held to adopt standards for state-aid cancer clinics or treatment in departments in general hopitals. The commission with the Division for Cancer Control have mailed literature and held meetings in all districts of the State and almost in every county. The work and service of the state commander, Mrs. H. B. Ritchie, the vice commanders and captains cannot be estimated. Twelve state-aid cancer clinics have been established. Dr. Chas. C. Harrold is president of the clinics and Dr. Robert C. Pendergrass is secretary. The State Department of Public Health has just issued its fourth annual report which carries a great deal of information with the different sections broken down into tables and other means of ready reference.

HOSPITAL COMMITTEE: Dr. D. Henry Poer, chairman, reported that at the last annual session (1941) the committee in cooperation with the State Department of Public Health made a special report illustrated with lantern slides; that during the year the activities of the committee have been explained at meetings in seven districts and that the 1st, 2nd and 8th districts did not invite the chairman to attend their meetings. Seemingly this committee has little importance and matters of import have been handled by other committees. Reference Committee No. 2 suggested the Committee might do a lot of good by close cooperation with the State Department of Public Health.

ORTHOPEDICS - ADVISORY, STATE WELFARE DEPARTMENT: Dr. F. G. Hodgson, chairman, reported that a number of meetings had been held, one with Dr. Martha Elliott of the Children's Bureau in Washington, who is in charge of the Crippled Children's work. They insisted on having a full-time medical director with Dr. Hiram Kite as medical consultant. This arrangement was agreed to with the understanding that the medical director would have full control and that there would be no interference and resulted in securing the services of Dr. L. C. Spencer of Louisiana. Our impression is that the lay directors of the department do not give the medical director the authority and cooperation which was agreed upon. The State has been divided into divisions and orthopedic surgeons hold clinics in each every two weeks. Since the epidemic of poliomyelitis in 1941, patients are attending the clinics in large numbers. Braces have been supplied and treatment given to some; equipment is inadequate, and funds insufficient for proper care. It is evident that Dr. Spencer has made a strenuous effort to do good work. We recommend that the entire program be turned over to the State Department of Public Health and that our committee continue in an advisory capacity.

SYPHILIS: Dr. Harold P. McDonald, chairman, suggested that means be provided for the eradication of syphilis and that the committee continue to function; that concentration of the armed forces has greatly increased the problem of syphilis. The State Department of Public Health was commended for its excellent work. We urge the Medical Association of Georgia to begin an early campaign in the newspapers and publish a series of articles which would take up primary infections and continue the educational program until the last and most dangerous conditions have been reached.

TUBERCULOSIS: Dr. Champ H. Holmes, chairman, reported that there had been a decrease during the last year; urged increased facilities at Alto; educate the laity; ask the Georgia Tuberculosis Association to meet with this Association at its next annual session (Referred to the Committee on Scientific Work).

AWARDS: Dr. Wm. R. Dancy, chairman, announced that the Hardman Loving Cup would be awarded to Dr. T. F. Abercromhie, director, State Department of Public Health, for his outstanding work in public health.

ADVISORY COMMITTEE—STATE DEPARTMENT OF PUBLIC HEALTH: Dr. Edgar H. Greene, chairman, reported that their meetings with the State Board of Health have been cordial and considerate of all suggestions. Our director of public health continues to make wonderful strides in his work and we do not think that it could be surpassed. We urge more vigorous control of venereal diseases in prostitutes and suggest that the Surgeon General of the U. S. Army accept selectees with positive serologic tests when not in an infectious stage. Some provisions should be made for the treatment of venereal diseases in 40 Georgia counties where there is no provision for this service at the present time. There is no improvement in midwifery.

CLINICAL PATHOLOGY: Dr. A. J. Ayers, chairman, urged that a committee he appointed from members of the Association to be known as the Clinical Pathology Laboratory Committee to obtain a better understanding between the physicians, the committee and the State Deparment of Public Health.

MEMORIAL: Dr. Wm. R. Dancy, chairman, conducted impressive memorial exercises in memory and in respect for members of the Association who have passed on to the great beyond during the last fiscal year.

APPENDICITIS: Dr. T. C. Davison, chairman, reported that the Committee had been as active as time would permit; that the State Department of Public Health donated 25,000 reprints which were distributed throughout Georgia, principally to high school students. Many talks have been made at meetings of women's civic organizations, also radio addresses; moving pictures have been shown in a number of counties. Most counties refused to take advantage of the pictures and circulating library. The Auxiliary has been active and the State Department of Public Health has promised additional literature in the event they have sufficient funds.

MATERNAL MORTALITY AND INFANT DEATHS: Dr. H. F. Sharpley, Jr., chairman, submitted a voluminous report with tables and other data to add to its importance and interest. The Reference Committee believes that great progress is being made in its educational campaign.

POST-GRADUATE MEDICAL EDUCATION: Dr. G. Lombard Kelly, chairman, reported that it was hard to get funds to promote and carry post-graduate work to various sections of the State. He recommended that refresher courses be given by and at the medical schools of the State.

EDUCATIONAL FUND: The Council appropriated and it was approved by the House of Delegates an educational fund of $2,000.00.

MEDICAL NEWS: The Council appropriated, with the approval of the House of Delegates, funds to continue the publication of the Medical News.

BEDS FOR INDIGENT POOR: Motion carried by Dr. G. Lombard Kelly, Augusta, dean of the University of Georgia School of Medicine, that beds be provided for the indigent poor in the University Hospital by counties outside of Richmond so that patients may be treated by the full-time faculty of the University.

AUDITING COMMITTEE: The Committee composed of Drs. D. Lloyd Wood, Cleveland Thompson and W. F. Reavis, reported that they found the accounts of the

Medical Association of Georgia correct and accurately kept.

Benevolent Fund: The Council, with the approval of the House of Delegates, allocated the sum of 50 cents annually from the dues of each paid member to be added to the $5,000 appropriated at the last annual session (1941) for the Benevolent Fund.

Scientific Exhibit: Dr. W. F. Hamilton, chairman, reported that the Scientific Exhibit is worth careful study and that the success of the exhibit was due largely to the arrangements made by the Secretary-Treasurer.

Woman's Auxiliary: Mrs. Lee Howard, president, made an excellent report on the activities of the Auxiliary. The program was designed to aid in national defense, health education and advancement of the science of medicine. Members of the Auxiliary distributed large quantities of literature and traveled hundreds of miles to promote their work.

Advisory Committee—Woman's Auxiliary: Dr. Jas. N. Brawner, chairman, complimented the Auxiliary for the extensive scope of its activities and cooperation with the Advisory Committee. He reported that great progress had been made.

National Youth Administration: Dr. C. L. Ayers, chairman, reported on the value of the work of the Administration and stated that its activities were turned to the war effort.

Military Defense: Dr. Edgar H. Greene, chairman, stated that this committee had been known as a Committee on Medical Preparedness; that the committee has a list of all the physicians in the State, which gives the race, age, sex, physical condition and whether or not available for military duty; have records on the faculty of medical schools and staffs of hospitals. The data are cross-indexed. Descriptions of this service have been published in The Journal of the American Medical Association. Some references have been published in The Journal of the Medical Association of Georgia. The Surgeon General of the U. S. Army will designate medical officers and typists to conduct recruiting offices for physicians.

Pediatrics—Advisory, State Board of Health: Dr. W. W. Anderson, chairman, reported that the committee had been active and had the active support of the State Department of Public Health, especially that of Dr. Edgar Watson, of the Department of Child Welfare, who continuously calls on the pediatricians of the State for advice. While this committee has held only one meeting, it has functioned by correspondence between its members and seemingly in a successful way. In addition to the advisory capacity of the committee, it with the help of the State Pediatric Society, Academy of Pediatrics and the Child Welfare Department all have pledged their best efforts for the 3,000 to 3,500 premature infants born annually in the State, of whom about 40 per cent die. The committee urged county societies to immunize dependent children, and the parents who are financially responsible should pay for the preventive treatment of their children. Suggested that the committee be authorized to continue its work along the same lines as before.

Fraternal Delegates: Interesting addresses were made by the following fraternal delegates: Dr. R. L. Henry, Georgia Dental Association; Dr. Robert C. Wilson, Georgia Pharmaceutical Association; Dr. Gilbert E. Fisher, Medical Association of the State of Alabama; Dr. Homer C. Pearson, Florida Medical Association; Dr. Robert Doughty, South Carolina Medical Association and Dr. Charley R. Henry, Tennessee State Medical Association. Reports were made by our fraternal delegates to other meetings: Dr. W. F. Reavis to the Florida Medical Association; Dr. Don Cathcart to Medical Association of the State of Alabama.

Resolution by the Fulton County Medical Society adopted as follows: "Chapter III, section 8, change section to read as follows: It shall divide the State into Councilor districts, one for each Congressional district, and when the best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies. District societies shall meet semi-annually on a date decided upon by each society. The officers of the district societies shall consist of a president and a vice president, who shall be elected annually; and a secretary-treasurer who shall be elected for three years. The secretary-treasurers of the district societies shall meet annually with the Council at its winter meeting for the purpose of arranging dates, and planning programs for the semi-annual meetings."

Resolution by the Secretary-Treasurer Adopted: "Whereas, The activities of the Medical Association of Georgia have grown each year; and

Whereas, There should be established a permanent headquarters office for the routine business of the Association, for the preservation of the archives of the Association, including medical history; and for a medical package library service for the benefit of both the medical profession and the public; and

Whereas, The finances of this Association are now favorable to the development of such a plan; and

Whereas, This year—1942—marks the hundredth anniversary of Dr. Crawford W. Long's discovery of the anesthetic properties of ether, and

Whereas, It would be appropriate for this Association to honor the memory of its most distinguished deceased member — Crawford Williamson Long — by naming the proposed building the Crawford W. Long Memorial Building; therefore

Be It Resolved, By the Council of this Association, and the same is recommended and transmitted to the House of Delegates and the Association in general session, at Augusta, this May 1, 1942, that the Medical Association of Georgia develop, through its Council, plans for a permanent headquarters building for the Association, and that the sum of Five Thousand ($5,000) Dollars be set aside by the Association's Secretary-Treasurer to be known as the Building Fund, the fund to be added to from year-to-year as the Association directs until a sufficient amount is available to facilitate a suitable building program." (Adopted by the House of Delegates on May 1, 1942).

RESOLUTION — UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE: "Whereas, The University of Georgia School of Medicine has for more than one hundred years taught and graduated physicians for Georgia, the Southeast, the Nation and all the armed forces of the United States;

Whereas, These graduates have served faithfully, efficiently and with equal ability to those graduated from other leading medical schools in the United States;

Whereas, The University of Georgia School of Medicine now has a faculty and student body which compare favorably with the leading medical schools of the Nation;

Whereas, The continuation of this medical school as an accredited school is of vital importance to the people of Georgia, the Southeast, the Nation, and particularly to the Army, Navy, Marine and Air Corps of the United States, and;

Whereas, The Council on Medical Education and Hospitals of the American Medical Association, of which Association the Medical Association of Georgia is a constituent member, has removed the University of Georgia School of Medicine from its accredited list;

Therefore Be It Resolved, That the Medical Association of Georgia, in convention assembled, direct its committee on Public Policy and Legislation to inquire into the cause of such removal, to continue its work unremittingly until its disability is removed. This committee shall consult with the Executive Committee, the delegates to the American Medical Association, and may ask the help of our Council in its work. This committee shall see to it that the University of Georgia School of Medicine is restored to the accredited list as soon as possible for the good of the people of Georgia."

Resolved, That the 1942 session of the House of Delegates set the amount of dues at $7 per capita for the year 1943.

Motion carried that the budget for operating expenses during the fiscal year 1942-43 remain the same as for 1941-42.

Atlanta was selected as the meeting place for the ninety-fourth annual session of the Association to be held May 11, 12, 13, 14, 1943.

MEMBERS REGISTERED AT THE NINETY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 9-12, 1942

Abreu, Benedict E., Augusta
Allen, Eustace E., Atlanta
Allen, Myron B., Hoschton
Aven, C. C., Atlanta
Barnett, Crawford F., Atlanta
Boland, Frank K., Jr., Atlanta
Bunce, Allen H., Atlanta
Byne, J. M., Jr., Waynesboro
Camp, R. T. Fairburn
Chamberlin, Donald T., Atlanta
Chollak, Joseph P., Macon
Claiborne, T. Sterling, Atlanta
Clark, Jas. J., Atlanta
Clark, T. H., Douglas
Clay, Grady E., Atlanta
Collier, Thos., Atlanta
Collins, Braswell E., Waycross
Compton, H. T., Savannah
Davison, Hal M., Atlanta
DuVall, Beecher, Atlanta
Eubanks, Geo. F., Atlanta
Faggart, Geo. H., Savannah
Fancher, J. K., Atlanta
Ferguson, Ira A., Atlanta
Fitts, Jno. B., Atlanta
Franklin, R. C., Swainsboro
Giddings, Glenville, Atlanta
Greenblatt, Robert B., Atlanta
Greene, Edgar H., Atlanta
Harrell, H. P., Augusta
Harwell, Carl M., Jr., Americus
Herman, Seymour J., Camp Stewart
Holloway, Geo. A., Atlanta
Holmes, Champ, Atlanta
Irwin, Chas. E., Warm Springs
Kellum, J. M., Thomaston
Kibbe, Milton H., Fort Benning
Kracke, Roy R., Emory University
Kunns, D. M., Fort McPherson
Laws, Clarence L., Atlanta
Lewis, S. J., Augusta
Mabon, Robert F., Atlanta
Mann, Frank R., McRae
Martin, J. D., Atlanta
Minnich, F. R., Atlanta
Minor, Henry W., Atlanta
Mulherin, Wm. A., Augusta
Newsom, N. J., Sandersville
Paullin, Jas. E., Atlanta
Phillips, A. M., Macon
Phillips, W. Parks, LaGrange
Pratt, Lawrence A., Atlanta
Pruitt, Marion C., Atlanta
Roberts, C. W., Atlanta
Roberts, M. Hines, Atlanta
Ross, Thos. L., Macon
Rouglin, Louis C., Atlanta
Rudder, Fred, Atlanta
Sauls, H. C., Atlanta
Schley, Francis C., Columbus
Selman, W. A., Atlanta
Shanks, Edgar D., Atlanta
Simmons, John W., Brunswick
Sinkoe, Samuel J., Atlanta
Thoroughman, J. C., Atlanta
Tobin, Wm. J., Fort Benning
Townsend, Eleanor W., Atlanta
Venable, D. R., Columbus
Volpitto, Perry P., Augusta
Walker, E. Y., Milledgeville
Weaver, Olin H., Macon
Williams, W. J., Augusta
Woodbury, Robert A., Augusta
Yampolsky, Joseph, Atlanta

PAY OF ARMY AND NAVY OFFICERS

Navy Rank	Army Rank	Monthly Base Pay	Annual Base Pay and Allowances With Dependents	No Dependents
Captain	Colonel	$333.33	$5,871.96	$5,175.96
Commander	Lt. Col.	291.67	5,588.04	4,676.09
Lt. Commander	Major	250.00	4,484.00	3,936.00
Lieutenant	Captain	200.00	3,792.00	3,336.00
Lieutenant (Junior Grade)	1st. Lt.	166.67	3,152.04	2,696.04

MEMBERS REGISTERED AT THE NINETY-THIRD ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF GEORGIA, AUGUSTA, APRIL 28, 29, 30—MAY 1, 1942

A

Abercrombie, T. F., Atlanta
Acree, George, Gordon
Adams, Chas. D., Bloomingdale
Akerman, Joseph, Augusta
Alden, Herbert, Atlanta
Aldrich, Fred N., Macon
Allen, C. H., Bremen
Allen, Eustace A., Atlanta
Allen, E. W., Milledgeville
Allen, H. D., Jr., Milledgeville
Allen, Lane H., Augusta
Allgood, J. L., Jr., Elberton
Alsobrook, J. S., Rossville
Anderson, J. C., Macon
Anderson, Robert T., Atlanta
Anderson, W. W., Atlanta
Ansley, H. G., Decatur
Applewhite, J. D., Macon
Arnold, M. F., Macon
Ashford, John, Athens
Askew, Rufus A., Atlanta
Atkinson, H. C., Macon
Austin, Jeff, Moultrie
Ayer, Guy D., Atlanta
Ayers, A. J., Atlanta
Ayers, C. L., Toccoa

B

Baird, J. Mason, Atlanta
Ballenger, E. G., Atlanta
Banister, H. G., Ila
Barksdale, C. R., Jr., Blakely
Barksdale, J. S., Macon
Barrett, Clara B., Atlanta
Barton, Wm. L., Macon
Bashinski, Benj., Macon
Bateman, Gregory W., Augusta
Battey, Colden R., Augusta
Battey, W. W., Augusta
Baxley, W .W., Macon
Beasley, B. T., Atlanta
Bedingfield, R. A., Cadwell
Bedingfield, W. O., Savannah
Bedingfield, W. R., Augusta
Bell, Arlis G., Augusta
Bell, Jack E., Swainsboro
Bellhouse, Helen W., Thomasville
Benson, Earl B., Marietta
Bernard, G. T., Augusta
Bent, H. F., Midville
Bickerstaff, Hugh J., Baltimore, Md.
Billinghurst, G. A., Camp Wheeler
Black, C. E., Macon
Blalock, J. C., Atlanta
Boland, Frank K., Atlanta
Bonner, W. H., Lavonia
Boswell, W. C., Macon
Bowdoin, C. D., Atlanta
Bowen, J. B., Register
Boyd, Wm. S., Augusta
Bradley, D. M., Waycross
Bradley, J. D., Milledgeville
Bradley, R. H., Chatsworth
Branch, J. R. B., Macon
Brannen, F. H., Quitman
Brawner, Jas. N., Jr., Smyrna
Brawner, Jas. N., Smyrna
Brittingham, Jno. W., Augusta
Broaddrick, G. L., Dalton
Brown, Annella, Dublin
Brown, F. Bert, Savannah
Brown, George W., Marietta
Brown, Hilton J., Douglasville
Brown, J. B., Augusta
Brown, R. B., Graymont
Brown, Stewart D., Royston
Brown, Walter, Savannah
Brown, W. E., Augusta
Bunce, Allen H., Atlanta
Burdashaw, Jas. F., Augusta
Burdashaw, W. J., Augusta
Burke, B. Russell, Atlanta
Burleigh, B. D., Augusta
Burpee, C. M., Augusta
Bussey, J. G., Austell
Butts, J. H., Augusta
Bryant, C. H., Comer
Bryson, E. H., Augusta
Bryans, Iverson, Jr., Augusta
Byer, L., Augusta
Byer, Louis, Augusta
Byers, Kathleen, Augusta
Byne, J. M., Jr., Waynesboro
Byne, J. M., Sr., Waynesboro

C

Calhoun, Wm. C., Macon
Callahan, Alston, Atlanta
Callaway, Enoch, LaGrange
Cameron, Stewart A., Augusta
Cameron, R. R., Macon
Campbell, J. L., Atlanta
Caducci, Joseph F., Augusta
Case, Clark, Atlanta
Cate, Chas. V., Colquitt
Cathcart, Don F., Atlanta
Chandler, J. H., Swainsboro
Chaney, Ralph H., Augusta
Chappell, C. C., Cordele
Chapin, W. Paul, Augusta
Chastain, Philip J., Thomasville
Cheek, O. H., Dublin
Cheves, H. L., Union Point
Cheves, L. C., Jr., Montezuma
Childs, J. R., Atlanta
Clark, Jas. J., Jr., Augusta
Clark, Jas. J., Atlanta
Clark, W. H., LaGrange
Claxton, E. B., Dublin
Coker, Grady N., Canton
Coleman, Fred, Dublin
Coleman, Warren, Eastman
Collier, Thos. J., Atlanta
Collins, Braswell E., Waycross
Collins, Clyde, Gainesville
Collinsworth, A. M., Atlanta
Collinsworth, P. L., Atlanta
Combs, J. M., Augusta
Copeland, H. J., Griffin
Cochran, W. N., Norcross
Corn, Ernest, Macon
Cornett, D. M., LaFayette
Cox, C. G., Milledgeville
Chrisman, W. W., Macon
Churchill, C. W., Thomson
Cleckley, Hervey, Augusta
Clements, Fred N., Adel
Cranston, W. J., Augusta
Crawford, Herschell, Atlanta
Crowell, Robert W., Carrollton
Cross, John B., Atlanta
Cunningham, W. A., Augusta

D

Dancy, Wm. R., Savannah
Daniel, Byron, Sardis
Daniel, Ernest F., Jr., Millen
Darby, V. Lee, Vidalia
Darden, Horace, Sparta
Davenport, T. F., Atlanta
Davis, Abe J., Swainsboro
Davis, A. W., Warrenton
Davis, B. B., Gainesville
Davis, R. Carter, Atlanta
Davis, E. B., Byromville
Davis, Shelley C., Atlanta
Davison, Hal M., Atlanta
Davison, T. C., Atlanta
Deal, B. A., Statesboro
DeVaughn, N. M., Augusta
Dickens, Benj. F., Brinson
Dickens, C. H., Madison
Dillard, J. B., Davisboro
Dimmock, Avary, Atlanta
Dismuck, H. L., Ocilla
Donahue, H., Augusta
Drane, Robert, Savannah
Draper, O. D., Augusta
DuVall, Beecher, Atlanta

E

Elliott, W. G., Cuthbert
Ellis, John, Atlanta
Ellison, R. G., Millen
Equen, Murdock, Atlanta

F

Farber, Marion E., Valdosta
Farmer, C. Hall, Macon
Fenn, H. R., Augusta

Ferguson, David, Milledgeville
Ferrell, T. J., Waycross
Ferrell, R. G., Jr., Dublin
Fincher, Edgar F., Atlanta
Flanders, Jas. F., Jr., Dublin
Fletcher, Elizabeth, Augusta
Floyd, Waldo E., Statesboro
Fountain, Jas. A., Macon
Fowler, Major, Atlanta
Fowler, R. W., Marietta
Frech, H. C., Jr., Savannah
Freeman, Norman, LaGrange
Freeman, P. L., Thomaston
Fay, May, Augusta
Funderburke, A. G., Moultrie
Funke, John, Atlanta
Funkhouser, W. L., Atlanta
Fuller, Geo. W., Atlanta

G

Gallemore, J. L., Perry
Garner, John P., Atlanta
Garner, W. R., Gainesville
Gatewood, T. Schley, Americus
Gay, Thomas Boling, Atlanta
Gholston, W. D., Danielsville
Gibson, Frank, Thomaston
Gibson, Roy, Columbus
Gilbert, Ben, Atlanta
Giles, J. T., Byromville
Gilbert, R. B., Greenville
Goodwin, Thos. W., Augusta
Gleaton, E. N., Savannah
Glover, Howard, Newnan
Graham, W. L., Jr., Augusta
Greenblatt, Robert, Augusta
Green, Charlie B., Waynesboro
Greene, Edgar H., Atlanta
Greer, Zach, Cordele
Griggs, H. E., Conyers
Gross, O. S., Vidalia

H

Hagood, M. M., Marietta
Hall, W. D., Calhoun
Hall, Thomas H., Macon
Hallum, Alton V., Atlanta
Hamilton, W. F., Augusta
Harbin, Lester, Rome
Harbin, William, Jr., Rome
Hardman, Billy S., Gainesville
Harper, Fred, Jesup
Harper, G. T., Dewy Rose
Harper, H. T., Jr., Augusta
Harper, Jack, Augusta
Harrell, H. P., Augusta
Harrold, Thomas, Macon
Harvey, C. W., Hogansville
Harrison, F. N., Augusta
Hearin, D. L., Augusta
Hildebrand, Virginia, Augusta
Helton, B. L., Sandersville
Hendrix, A. M., Ball Ground
Hensley, E. A., Gibson
Herman, Ann, Augusta
Henry, C. G., Augusta
Hewell, Guy C., Atlanta
Hill, Arthur W., Atlanta
Hill, W. H., Palmetto
Hilsman, A. H., Albany
Hitchcock, J. P., Augusta
Hodgson, F. G., Atlanta
Holliday, J. C., Athens
Holmes, Champ, Atlanta
Holmes, L. P., Augusta
Holmes, Walter R., Atlanta
Holton, C. F., Savannah
Howard, Chas., Atlanta
Howard, Lee, Savannah
Huie, Lynn M., Monroe
Huson, W. J., Covington

J

Jenkins, H. B., Donalsonville
Jenkins, J. I., Hartwell
Jernigan, C. S., Sparta
Johnson, Eric C., Savannah
Johnson, W. A., Elberton
Johnston, J. V., Calhoun
Jones, J. P., Macon
Jones, Robert T., Canton

K

Kanter, Walter, Savannah
Kaplan, Leonard A., Augusta
Katz, Harvey W., Augusta
Katzman, George M., Augusta
Kay, J. B., Byron
Kelley, D. C., Lawrenceville
Kelley, L. H., Atlanta
Kelly, G. Lombard, Augusta
Keen, O. F., Macon
Kennedy, R. L., Metter
Kenyon, Steve P., Dawson
Kilpatrick, C. M., Augusta
Kincaid, E. J., Americus
King, J. L., Macon
King, Ruskin, Savannah
Kirkland, W. P., Manchester
Kitchens, W. C., Augusta
Knight, Arthur, Waycross
Krafka, Joseph, Augusta
Kusnitz, Morris, Alamo

L

Lake, Wm. F., Atlanta
Lamm, J. H., Atlanta
Lancaster, H. H., Gainesville
Landham, J. W., Atlanta
Land, Polk S., Columbus
Lang, G. H., Savannah
Lange, J. Harry, Atlanta
Leaphart, E. C., Augusta
Lee, F. Lansing, Augusta
Lennard, O. D., Sandersville
Leonard, R. E., Atlanta
LeRoy, A. G., Tifton
Leslie, J. T., Griffin
Lever, Joseph E., Metter
Levy, M. S., Augusta
Lentz, John R., Louisville
Lewis, S. J., Augusta
Little, Frank C., Thomasville
Little, Thomas F., Tifton
Looper, B. K., Dalton
Lokey, Hugh M., Atlanta
Lokey, Julian L., Augusta
Long, H. W., Eastman
Lott, Oscar H., Savannah
Lowe, W. R., Midville
Lunsford, Guy G., Atlanta
Lundquist, W. D., Waynesboro

M

Mabry, Hugh, Augusta
Major, Robert C., Atlanta
Maner, Edwin, Savannah
Mann, F. R. McRae
Martin, J. M., Augusta
Martin, S. W., Hazlehurst
Martin, William O., Jr., Atlanta
Martin, Walter D., Shellman
Massengale, L. R., Lumpkin
Massey, Clayton M., Fitzgerald
Matthews, W. Eugene, Augusta
Maxwell, Edgar J., Lexington
May, E. R., Lincolnton
Mayo, J. Palmer, Richland
McAliley, R. Geo., Atlanta
McCall, J. T., Rome
McCarver, W. C., Jr., Vidette
McCarver, W. C., Vidette
McCollum, R. Roy, Jr., Kingsland
McCurdy, Willis T., Stone Mountain
McDonald, Harold, Atlanta
McDaniel, J. Z., Augusta
McElveen, J. M., Brooklet
McGahee, R. C., Augusta
McGarity, J. A., Watkinsville
McKnight, Bob, Toccoa
McLaughlan, C. K., Macon
McRae, Duncan, McRae
Mercer, J. E., Vidalia
Metts, J. C., Savannah
Mealing, H. G., North Augusta
Meadows, Fred, Augusta
Michel, H. M., Augusta
Miller, A., Augusta
Miller, G. T., Macon
Miller, Harold A., Augusta
Minchew, B. H., Waycross
Mitchell, Frank B., Jr., Milledgeville
Mitchum, W. R., Jr., Monroe
Mixson, Harry, Valdosta
Mixson, J. F., Jr., Valdosta
Mobley, J. W., Pelham

Montgomery, R. C., Butler
Moon, Jack B., Augusta
Mooney, A. J., Sr., Statesboro
Mooney, John, Jr., Statesboro
Morris, Albert L., Young Harris
Morris, J. E., Moultrie
Morrison, Howard J., Savannah
Mountain, Geo. W., Augusta
Mulherin, Charles, Augusta
Mulherin, Philip, Augusta
Mulherin, Wm. A., Augusta
Mulkey, A. P., Millen
Mulkey, Q. A., Millen
Mullins, D. F., Atlanta
Murphey, Eugene E., Augusta
Murphey, W. J., Decatur
Muse, L. H., Atlanta

N

Neal, Jule C., Jr., Rome
Newsome, E. G., Sandersville
Nichols, Fenwick E., Savannah
Nicholson, Geo. T., Blairsville
Nicolson, Wm. Perrin, Atlanta
Nippert, Philip H., Atlanta
Norton, Robert, Rome
Norvell, J. T., Augusta

O

O'Conner, Cecelia, Augusta
Oliphant, J. B., Adel
Olmstead, G. T., Savannah
O'Neal, John B., Augusta
Olnick, Herbert, Blue Ridge
Olsen, Margaret, Augusta
Osborne, V. W., Atlanta
Osteen, W. Loyd, Augusta
Owen, J. D., Rochelle

P

Palmer, J. P., Waynesboro
Palmer, J. W., Ailey
Parker, Lee, Waycross
Partee, J. E., Savannah
Patton, Sam E., Macon
Patterson, J. C., Cuthbert
Paty, R. M., Jr., Porterdale
Paullin, Jas. E., Atlanta
Peebles, W. J., Athens
Perkins, H. R., Griffin
Persall, John T., McRae
Pendergrass, R. C., Americus
Person, W. E., Atlanta
Petrie, Lester M., Atlanta
Phillips, A. M., Macon
Phillips, C. M., Jr., Augusta
Phillips, J. T., Augusta
Phinizy, Irvine, Augusta
Pierce, L. W., Waycross
Pilcher, J. J., Wrens
Pinkston, H. G., Ludowici
Pittman, C. S., Tifton
Pittman, C. S., Jr., Tifton
Pittman, J. L., Atlanta
Poer, D. Henry, Atlanta
Porter, Ralph, Savannah
Powell, T. E., Atlanta
Powell, W. F., Macon
Price, W. T., Augusta
Pruitt, M. C., Atlanta
Puett, W. W., Norcross
Pund, Edgar R., Augusta

R

Rabhan, L. J., Savannah
Randolph, W. T., Winder
Rayle, A. A., Atlanta
Reavis, W. F., Waycross
Redfearn, J. A., Albany
Reifler, R. M., Macon
Revell, S. T. R., Louisville
Reynolds, H. M., Cairo
Rhodes, R. L., Augusta
Rice, Guy V., Albany
Richards, W. R., Calhoun
Richardson, Chas. H., Macon
Ridley, C. L., Macon
Rieser, Charles, Atlanta
Risteen, V. A., Augusta
Roach, F. D., Statesboro
Roberts, C. W., Atlanta
Roberts, W. Vincent, Augusta
Robertson, J. Righton, Augusta
Robinson, David, Savannah
Rogers, J. V., Cairo
Rogers, T. E., Jr., Macon
Roper, C. J., Jasper
Roper, W. E., Jasper
Rosen, E. F., Savannah
Rosen, Samuel F., Savannah
Rosenberg, Albert, Swainsboro
Ross, Thomas L., Jr., Macon
Roule, J. Victor, Augusta
Rubin, Saul, Savannah
Rubin, S. N., Gordon
Rushin, C. E., Atlanta

S

Sage, Dan Y., Atlanta
Salley, W. Collier, Augusta
Salter, W. L., Savannah
Sams, J. R., Covington
Sanchez, S. E., Jr., Barwick
Sandison, Jas. Calvin, Atlanta
Sanderson, E. S., Augusta
Sauls, H. C., Atlanta
Schaefer, W. B., Toccoa
Schley, Frank, Columbus
Schenck, H. C., Atlanta
Scharnitzky, E. O., Augusta
Scott, J. Allen, Statesboro
Seaman, H. A., Waycross
Seay, E. F., Marshallville
Selman, W. A., Atlanta
Seymour, Glenn E., Albany
Shackleford, B. L., Atlanta
Shanks, Edgar D., Atlanta
Sharp, C. K., Arlington
Sharp, C. M., Alto
Sharpe, W. W., Alma
Sharpley, Helen A., Savannah
Scheck, Kay C., Atlanta
Shearouse, Wm., Savannah
Sherman, J. H., Augusta
Shiflet, Robert E., Augusta
Shuler, R. H., Augusta
Simmons, J. W., Brunswick
Simpson, A. W., Jr., Washington
Simonton, Fred H., Chickamauga
Skiles, W. Vernon, Atlanta
Smith, A. C., Elberton
Smith, A. D., Augusta
Smith, Allen, Macon
Smith, C. Conrad, Augusta
Smith, J. Gregg, Savannah
Smith, Leo, Waycross
Smith, Linton, Atlanta
Smith, Louis, Lakeland
Smith, Reuben E., Lawrenceville
Smith, Richard L., Cochran
Snelling, J. M., Jr., Augusta
Starr, Trammell, Dalton
Stoker, E. Malcom, Augusta
Stubbs, Trawick H., Atlanta
Steadman, Henry E., Augusta
Stewart, Calvin B., Atlanta

T

Teuton, G. Ed., Augusta
Tessier, Claude E., Augusta
Thomas, D. R., Augusta
Thomason, C. G., East Point
Thompson, C., Millen
Thornton, Lawson, Atlanta
Thoroughman, J. C., Atlanta
Thurmond, J. W., Augusta
Timmerman, J. P., Hephzibah
Timmons, C. C., Augusta
Todd, L. N., Augusta
Torpin, Richard, Augusta
Turner, Marticle, Valdosta
Tucker, J. P., Augusta
Turner, W. W., Nashville

U

Upchurch, W. E., Atlanta

V

Vickers, Thos. E., Harrison
Vinson, Frank, Fort Valley
Vinson, T. O., Griffin
Volpitto, Perry, Augusta

W

Walker, John R., Atlanta
Walker, Mary Helen, Augusta
Wall, C. K., Thomasville
Wall, W. H., Blakely
Wallace, J. W., Douglas
Walton, Jno. M., Atlanta

Ware, D. B., Fitzgerald
Ware, Ford, Macon
Ware, Brewton C., Warrenton
Weaver, H. G., Macon
Weaver, O. H., Macon
Wells, E. D., Jr., Augusta
Wasden, Harry, Augusta
Watson, E. R., Atlanta
Watson, O. O., Macon
Watson, W. G., Augusta
White, W. O., Augusta
Whitfield, T. W., Tate
Whitman, O. F., Statesboro
Wilcox, Everard A., Augusta
Willett, L. F., Atlanta
Williams, David C., Jr., Lavonia
Williams, L. W., Savannah
Williams, Virgil B., Savannah
Williams, W. J., Augusta
Wilson, Clyde A., Jr., Cordele
Wilson, H. L., Waycross
Wilson, S. Elliott, Savannah
Wilson, W. D., Savannah
Witten, H. O., Augusta
Woddell, J. D., Lumpkin
Woodbury, Robert A., Augusta
Wood, D. Lloyd, Dalton
Woods, Leo C., Augusta
Wright, Edward S., Atlanta
Wright, Geo. W., Augusta
Wright, Peter B., Augusta

Y

Yampolsky, Jos., Atlanta
Yeomans, Neal F., Jesup
Yarbrough, Y. H., Milledgeville
Youman, C. R., Hazlehurst
Young, W. W., Atlanta

GUESTS AND VISITORS

Davis, Hartley, Ocala, Fla.
Eberhart, Clark A., Camp Croft, S. C.
Fisher, Gilbert E., Birmingham, Ala.
Fuller, R. M., Greenwood, S. C.
Haddock, S. H., Anderson, S. C.
Hall, S. P., Scottsboro, Ala.
Hearn, Paul P., Greenville, S. C.
Johnson, O. J., Chicago, Ill.
Lahey, Frank H., Boston, Mass.
Lee, Carleton H., Wichita, Kan.
Long, Perrin H., Baltimore, Md.
Poole, L. R., Easley, S. C.
Pritchard, Paul B., Columbia, S. C.
Vorisek, Elmer A., Atlanta
Woodard, Robert C., Miami, Fla.

SYPHILIS IN GEORGIA

HARRY A. NEVEL, M.D.
Associate Venereal Disease Control Officer, State Department of Public Health
Atlanta

Modern principles in the treatment of syphilis have been well established since 1917. Modern epidemiologic procedure for the control of syphilis has been well known since 1918. The year 1935 saw the development of a tremendous campaign to convince the nation of its need for *permanent* syphilis control. Social security funds in 1936 gave a great impetus to all phases of public health. In 1938 Federal funds specifically for venereal disease control became available.

In the van of a national movement, Georgia has had a venereal disease control program since 1918. With the extra funds made available in 1938, our program developed into modern venereal disease control as we know it today, in spite of lack of physical equipment and trained personnel.

What's been done in these three years? It's a simple matter to answer: "200 clinics treat 20,000 patients every month." These figures have no significance until we know how much syphilis there is in the State (a figure technically known as prevalence), and how many new cases develop each year (technically known as incidence).

Many attempts have been made to estimate these figures. The best estimate for the nation as a whole will be found in "How Many People Have Syphilis?" by M. DiMario, M. S. Edwards, and C. W. Clarke in the Journal of Social Hygiene, Volume 27, pages 3-10, 1941. They conclude that 3 per cent of the adult population of the United States has syphilis. This is in marked contrast to the usual statement that "ten million have it." Similarly, many estimates of syphilis in Georgia have ranged between 250,000 to 300,000 cases. These estimates must have been the result of sheer guessing since no large survey had been made in Georgia. The Selective Service gave us our first really large-scale survey. True, the group surveyed was selected by sex and by age, but numerous previous surveys had already given us a fairly good idea as to the ratios which the sexes and the age groups bear to each other.

The U. S. Public Health Service has tabulated the laboratory reports on the first million serologic tests made on the nation's selectees. The tabulation includes the reports received by the Public Health Service through April 15, 1941. Of this first million, approximately 18,000 selectees were from Georgia. Below is a condensation of the tabulation.

PREVALENCE OF SYPHILIS AMONG GEORGIA SELECTEES

		Total Tested	*Total Infected*	*Rate/1000 Tested*
WHITE	Urban	4990	215	43.1
	Rural	5954	142	24.0
	Total*	11014	465	42.2
NEGRO	Urban	3101	1160	374.1
	Rural	2857	707	247.4
	Total*	6023	1886	313.1
STATE TOTAL**		18102	2424	133.9

*Includes "residence not given".
**Includes "other races".

When we combine the draft figures with the facts learned from previous surveys, we can

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GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A. — Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service — Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

INDUSTRIAL NURSING

Margaret Currie, R.N.,
Gainesville
Chairman, Industrial Section, Georgia State Organization for Public Health Nursing

Industry employs a large section of the nation's population and these workers are an integral part of the communities in which they live and work. Since this is true, industrial health or the lack of it not only has a significant effect on industrial output, but on the health of the community as well. Industry, workers, and members of the medical and nursing profession are more and more becoming aware of the role of industrial health, and are increasingly anxious to effectively meet health needs existing in the various industries.

An effective industrial hygiene program is carried out under the direction of a qualified physician. The nurse has an invaluable part to play in the execution of such a program, but if she is to provide the best possible service to industry, she needs to understand both plant and community problems. She must know how the problems affect the workers and their families at home and at work. She needs to be familiar with the available methods and resources for preventing illness and promoting health.

To the well qualified nurse, industrial nursing presents a constant challenge and affords a rich, varied, and satisfactory field of service.

The objectives of an industrial hygiene service may conveniently be grouped as follows.

1. To prevent industrial accidents and occupational diseases.
2. To render adequate care to those employees who do sustain industrial injuries and disabilities.
3. To promote and safeguard the health and efficiency of the workers.
4. To restore to health and as nearly normal functioning as possible every ill or disabled worker and to reduce death.
5. To render public health service to the families of the workers when at all possible.

Let us think of the factors in connection with this first objective. The occupatioanl environment in which the employed person spends one-third of his time is most important to his health and protection. An industrial hygiene service should evaluate the plant's working conditions. It should study illumination, ventilation, and air conditioning, dust control, sanitation, and the many and varied hazards present because of the machinery and materials which are used. When undesirable conditions are found, it should assist the management in bringing about necessary improvements. Plant environment alone is not responsible for the accidents; the worker himself must be taken into consideration. A good pre-employment examination with follow-up work by the nurse is a great contribution to the safety program. The physician can recommend applicants for work for which they are physically and mentally adapted, and potentially disabling conditions may be discovered early and treatment begun. Someone has said "the greatest tragedies are those which never occur because they are warded off by intelligence." Nowhere is this more true than in the prevention of occupational diseases.

As to the second, when injuries do occur the nursing service cares for minor wounds and assists the doctor in caring for the more extensive ones. It also helps in finding suitable employment in the plant for those workers sustaining partial disability until such time as they are capable of resuming their regular jobs.

The three remaining objectives may be discussed collectively, and one might well think of them as radiating from the pre-employment examination. The physical needs of the employee are determined, and constructive advice and help with plans for treatment are given. Through this examination, mutual confidence is established and the way is opened for a home visit by the nurse. In time members of the family come to depend upon the industrial hygiene service for control of communicable disease, ante-partum, postpartum, infant, pre-school, school, and home nursing services. The nurse is at all times alert to teaching possibilities.

Periodic health examinations should follow the pre-employment examination and special surveys, such as tuberculosis, syphilis, malaria and hookworm may be made among the workers.

It might be interesting in the discussion of industrial nursing—a branch of public health nurs-

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GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

VENEREAL DISEASES IN INDUSTRY

The attention of employers is now beginning to be focused on the relation that venereal diseases bear to lowered industrial efficiency and hidden costs. Some of the largest companies now carrying on programs of syphilis control include the DuPont Corporation, the Caterpillar Tractor Works, the Aluminum Company of America, the General Electric Company, the Koppers Coal Company, and the General River Coal Company. Men in the military services are also protected by official venereal disease control.

The problems in the expanding war industries are complicated by the large congregations of employees in areas away from their homes and with poor housing conditions. Under these conditions their chances of acquiring venereal diseases are high and its results are costly both to the worker and to his employer. War industries should protect themselves from these losses. A worker with early symptoms of syphilis, such as a sore or a body rash, may be psychologically disturbed and the quality of his work affected. However, such inefficiency as this is a minor thing compared to the disastrous occurrences which may be the result of unrecognized syphilis in its later stages. A bone injury in a patient with unrecognized latent syphilis may cause a longer period of disability than would be expected in a healthy individual. Accidents due to mental lapses in patients with unrecognized central nervous system syphilis may cost thousands of dollars in workers compensation to others who are injured or killed; in the damaged equipment; and in interruption in production through labor replacement.

The following venereal disease control program is proposed, adapted from the program suggested by Captain Ernest W. Brown, of the United States Navy:

(1) *Educational:*

(a) Management. The education of executives is sometimes necessary to teach them that all syphilitic personnel are not infectious, and that infectious cases are readily rendered non-infectious by treatment; also that such personnel are not bad industrial risks and will not prove expensive in costs for medical care or early retirement provided that adequate treatment is administered. To discharge a skilled worker whose infection is amenable to treatment is simply a waste of trained man power.

(b) Labor. To teach the employees the facts about venereal diseases, such as the mechanism of infection and the methods of prevention and treatment; the hazards of untreated or improperly treated syphilis being stressed. The most effective single method is the sound motion picture followed by a question period for the audience. Such educational films are available through the health department.

(2) *Blood tests.* Pre-employment and periodic—of all personnel. The State Health Department Laboratory is prepared to perform Kahn tests. Keidel tubes will be furnished at cost, or sterile sealed glass vials will be furnished free if desired. Cases with positive blood tests should be referred to the medical service for definitive disposition. One positive blood test alone unsupported by other evidence does not establish the diagnosis of syphilis, especially in the presence of acute febrile illness. Positive cases should not be discharged simply because they have syphilis. Compliance with the blood test should be a requirement for admission.

(3) *Disposition:*

(a) Cases positive with no other signs. These cases to be accepted for employment on condition that they will accept and maintain adequate treatment.

In view of the war emergency drain on the medical profession, a treatment clinic should be maintained by the medical department of the corporation unless competent treatment can be provided privately at reasonable prices.

(b) Cases presenting symptoms. Cases in the early infectious stage of syphilis should be deferred until rendered non-infectious by treatment; cases in late disabling stages should be permanently excluded.

(c) Cases found on periodic examination of employees. To be retained in employment in the event of compliance with treatment requirements; cases presenting evidence of late disabling stages to be retained, if feasible, by transfer to other types of activity not involving possible occupational hazards. In other words, discrimination must be strictly avoided. The leaders of both the American Federation of Labor and the Committee on Industrial Organization have given wholehearted support to the national syphilis program but are disinclined to advise active cooperation of members unless protection against discrimination is assured.

(d) Follow-up procedures. All new cases and all delinquents should be reported to the local health authorities for epidemiologic investigation, giving due consideration to the wishes and confidences of the patient. Patients should be vigorously warned of the dangers in lapsed treatment.

(4) *Records.* These should be confidential records filed in the medical department. Executives who might be prejudiced because of the existence of syphilis could not then discriminate against otherwise competent applicants.

The services of the central tabulating unit punch card record keeping system of the State Health Department are available to industrial clinics which meet the standards at no extra cost. This system simplifies keeping up with delinquents, epidemiologic records, etc., and statistical analyses.

(5) *Repression of prostitution.* Effective measures should be established inside the plant which are carefully coordinated with the local government venereal disease control efforts.

(6) *Gonorrhea control.* Will follow the same general lines as outlined above.

L. M. PETRIE, M.D.
JOHN M. WALTON, M.D.

INDUSTRIAL NURSING

(Continued from page 299)

ing—to point out some of its special advantages. In the first place, the worker and the nurse have a common interest; they are employed by the same company. Second, the group she works with is composed largely of persons who earn an adequate wage. In addition to this, the employees of many industries carry sick benefit insurance and hospital insurance. It is not difficult to see how this contributes to a health program, and third, those industries which have an industrial hygiene service provide adequately equipped health centers and actively support the program.

Industrial nursing is in the news today. It has made contributions to public health in the past, and will in the future, under the guidance of those physicians to whom it is responsible and with the help of national and state industrial hygiene services, make even more progressive contributions.

SYPHILIS IN GEORGIA

(Continued from page 298)

estimate that Georgia has approximately 100,000 colored and 10,000 white cases of syphilis. This agrees essentially with the estimates of Mario, Edwards, and Clarke, since our population is heavily weighted with Negroes.

When it comes to the incidence (number of new cases per year), we have very little to go on. In addition, the incidence drops fairly rapidly as infectious cases are discovered and treated. The prevalence decreases much more slowly and shows a considerable lag. Estimates of incidence usually vary from 10 to 20 per cent of the prevalence, with most of them nearer to 20 per cent. Five years ago or more the incidence in Georgia was probably close to 20 per cent. At the present stage in our program, it is more likely to be about 12 per cent of our prevalence.

We have registered in our clinics about 40,000 cases of syphilis. We are finding new cases at the rate of about 20,000 a year. If all the patients found were cured, we could expect to see syphilis an uncommon disease in Georgia in ten years. Actually, far less than 10,000 patients receive adequate treatment each year. This is brought out by data on selectees (not included in the above table). The age group 21-25 years had a rate of 93.8 cases of syphilis detected per 1,000 selectees tested. The age group 31-35 years had a rate of 207.6. The highest incidence of syphilis occurs in the age group 21-25 years. We must conclude that the age group 31-35 years includes those infected five to ten years before in addition to new infections acquired at the latter age. This means that the earlier infections were inadequately treated or not at all. With less than 10 per cent of our total syphilis under adequate treatment, unless we materially increase our efforts, we can expect that in ten years we will still have about 25 per cent as much syphilis as we now have.

Why is less than 10 per cent of our syphilis inadequately treated? For one thing, we haven't found it all. To improve our case-finding machinery, we need more clinics, more equipment, and, above all, more trained personnel. We are slowly getting more clinics and more equipment, but trained personnel cannot be secured. Apparently, personnel will not be available until after our national emergency is over.

Of the cases of syphilis found and under treatment, less than a third (closer to a quarter) receive adequate treatment. They simply do not come to the clinic regularly, nor do they come long enough. There are many reasons for this delinquency. The chief reason is the failure to acquaint the patient with the medical facts. The average patient feels perfectly healthy. In his lack of knowledge, he cannot grasp the fact that he needs long and continuous treatment. Even when he has decided to attend the clinic regularly, it takes very little to discourage him. A thoughtless phrase, stairs to climb, a crowded clinic, almost anything will dissuade him from coming to the clinic. As he misses one or several sessions and nothing dramatic occurs, he loses his fear of syphilis and stops coming altogether.

Another very frequent cause of delinquency is the treatment reaction. Arsenicals in the tissue or bismuth in the subcutaneous fat are extremely painful. The patient usually cannot do his work. The pain plus economic loss is enough to make any patient prefer the disease to its cure. The story gets around to the other patients. Clinic attendance in general is profoundly affected.

Other causes for delinquency are more readily remediable.

WOMAN'S AUXILIARY : OFFICERS 1942-43

President—Mrs. J. Lon King, 223 Buford Place, Macon.

President-Elect—Mrs. Wm. Bruce Schaefer, Toccoa.

First Vice President—Mrs. Harry M. Kandel, 432 Abercorn Street, Savannah.

Second Vice President — Mrs. Walter G. Elliott, Cuthbert.

Third Vice President — Mrs. Ralph W. Fowler, Marietta.

Recording Secretary—Mrs. J. C. Metts, 303 Anderson Avenue, Savannah.

Parliamentarian—Mrs. S. T. R. Revell, Louisville.

Treasurer—Mrs. Lucius N. Todd, Rural Delivery No. 2, Augusta.

Historian—Mrs. Jack R. McMichael, Quitman.

Corresponding Secretary—Mrs. Wallace L. Bazemore, 127 Beverly Place, Macon.

Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta

PRE-CONVENTION

The Executive Board of the Woman's Auxiliary to the Medical Association of Georgia met April 28, 1942, at 5:00 P.M. at the Bon Air Hotel in Augusta. The president, Mrs. Lee Howard, presided.

The Lord's Prayer was repeated in unison.

The minutes of the 1941 Post-Convention meeting were read and approved.

The minutes of the meeting of the Executive Board with the Advisory Committee were read and approved.

Mrs. H. G. Banister nominated the secretary, Mrs. J. C. Metts, to bring a report of the Executive Board meeting to the convention. Seconded by Mrs. Bruce Schaefer. Motion carried.

The Nomination Committee was elected as follows: Mrs. H. G. Banister, Ila, Chairman; Mrs. Chas. Usher, Savannah; Mrs. Claude E. Tessier, Augusta.

From Membership at Large: Mrs. W. W. Anderson, Atlanta; Mrs. A. J. Mooney, Jr., Statesboro; Mrs. J. A. Redfearn, Albany; Mrs. L. R. Massengale, Lumpkin.

There being no further business, the meeting adjourned at 5:50 P.M.

Report made as instructed. Report accepted. April 29, 1942.

MAY DUBIGNON HOWARD, *President.*
(MRS. LEE HOWARD)
RUTH M. METTS, *Recording Secretary.*
(MRS. J. C. METTS)

FIRST SESSION

The Eighteenth Annual Session of the Woman's Auxiliary to the Medical Association of Georgia was called to order by the President, Mrs. Lee Howard, at 9:45 A.M. in the Bon Air Hotel, Augusta, April 29, 1942.

The invocation was offered by Rev. Paul A. Turner, Pastor of St. John's Methodist Church. Welcome to the guests was expressed by Mrs. Lucius N. Todd, immediate past president of the hostess auxiliary. Mrs. W. W. Puett of Norcross, responded.

The following distinguished guests were introduced by Mrs. Ralph H. Chaney: Past presidents Mrs. J. N. Brawner, Mrs. C. W. Roberts, Mrs. W. R. Dancy, Mrs. Ralph Chaney, Mrs. S. T. R. Revell, Mrs. H. G. Banister. Also, Mrs. Lee Howard, President of Woman's Auxiliary to the Medical Association of Georgia, Mrs. Allen H. Bunce, wife of the President of the Medical Association of Georgia, Mrs. J. A. Redfearn, wife of the President-Elect of the Medical Association of Georgia, Mrs. J. Lon King, President-Elect of the Woman's Auxiliary to the Medical Association of Georgia, Mrs. W. A. Selman, First Vice-President; Mrs. J. R. McMichael, Third Vice President; Mrs. J. C. Metts, Recording Secretary; Mrs. Chas. Usher, Corresponding Secretary; Mrs. Bruce Schaefer, Treasurer, and Mrs. Ralph Freeman, Historian.

Mrs. James N. Brawner moved that a message of sympathy be sent Mrs. J. Bonar White and Mrs. Olin S. Cofer, absent on account of illness, also to Mrs. W. H. Myers a message of regret at her absence. Seconded by Mrs. Chas. Usher. Motion carried. Secretary was instructed to send message.

Dr. Allen H. Bunce, President of the Medical Association of Georgia, addressed the Auxiliary on "The Auxiliary as an Aid to Organized Medicine."

The President asked Mrs. James N. Brawner to serve as Parliamentarian in the absence of Mrs. J. E. Penland. Rules governing the convention were read. Mrs. Brawner moved that rules be adopted. Seconded by Mrs. C. W. Roberts. Motion carried.

Minutes of the second session of the 1941 convention were read for information.

Mrs. W. E. Mathews introduced pages for the morning: Miss Morgan and Miss Thaxton, nurses from the University Hospital. The President appointed Mrs. R. C. McGahee timekeeper.

The Secretary read the report of the Pre-Convention Board Meeting and announced the following Nominating Committee had been elected:

From the Executive Board: Mrs. H. G. Banister, Ila, Chairman; Mrs. Chas Usher, Savannah; Mrs. Claude E. Tessier, Augusta.

From Membership at Large: Mrs. W. W. Anderson, Atlanta; Mrs. A. J. Mooney, Jr., Statesboro; Mrs. J. A. Redfearn, Albany; Mrs. L. E. Massengale, Lumpkin.

Mrs. Howard read a message from Mrs. R. E. Mosiman, President of the Woman's Auxiliary

to the American Medical Association expressing regret at not being able to be with us.

Mrs. Ralph H. Chaney introduced Mrs. J. C. Reaves, Mobile, Ala., President of the Woman's Auxiliary to the Southern Medical Association, who gave an address entitled, "Keep 'em Flying." Mrs. Lucius N. Todd and Mrs. Claude E. Tessier, general chairmen for the convention were introduced. Mrs. C. M. Burpee announced plans for entertaining the guests.

Reports were heard from the following districts and counties:

First District—Mrs. W. E. Simmons
Second District—Mrs. C. S. Pittman
Seventh District—Mrs. Murl M. Hagood
Eighth District—Mrs. Louis Smith
Tenth District—Mrs. G. L. Loden
Chatham County—Mrs. L. W. Williams
Tift County—Mrs. A. J. LeRoy
Randolph-Terrell—Mrs. L. R. Massengale
Fulton County—Mrs. James N. Brawner
Washington County—Mrs. J. B. Dillard
Bibb County—Mrs. W. W. Chrisman
Baldwin County—Mrs. Dawson Allen
Cobb County—Mrs. Ralph Fowler
Ware County—Mrs. B. E. Collins
Gwinnett County—Mrs. W. W. Puett
Cherokee-Pickens—Mrs. C. J. Roper
Jackson County—Mrs. Ralph Freeman
Richmond County—Mrs. Lucius N. Todd
Stephens County—Mrs. C. L. Ayers.

Mrs. Ralph Chaney gave the following registration report:

State Officers	12	Members	40
State Chairmen	7	Guests	10
District Managers	5	Members-at-Large	3
County Presidents	9		—
Delegates	11	Total Registration	87
Alternates	3		

The President appointed the following special committees:

Judge, Exhibits and Scrapbook: Mrs. J. R. McMichael, Quitman; Mrs. H. M. Kandel, Savannah; Mrs. H. E. Griggs, Conyers.

Auditing Committee: Mrs. J. B. Dillard, Davisboro, Chairman; Mrs. B. E. Collins, Waycross; Mrs. George Fuller, Atlanta.

Resolutions Committee: Mrs. C. W. Roberts, Atlanta; Mrs. G. L. Loden, Colbert; Mrs. Murl M. Hagood, Marietta.

Mrs. Ralph Chaney read the proposed revision of the by-laws to be voted on at the Thursday session of business.

The President announced the invitation to hear the address of Dr. Frank Lahey, President of the American Medical Association.

There being no further business, the meeting adjourned at 12:30 P.M.

May duBignon Howard, *President.*
(Mrs. Lee Howard)
Ruth M. Metts *Corresponding Secretary.*
(Mrs. J. C. Metts)

Second Session

The second session of The Eighteenth Annual Convention of the Woman's Auxiliary to the Medical Association of Georgia was called to order by the President, Mrs. Lee Howard, at 9:35 Thursday, April 29, 1942. Rev. Hamilton West, Rector, St. Paul's Episcopal Church, Augusta, offered the invocation.

A message of welcome was given by Mrs. Claude E. Tessier, President of the Richmond County Auxiliary, to which Mrs. Ralph W. Fowler of Marietta, responded.

Miss June Hargrove and Miss Jeanette Winn were introduced as pages for the morning.

The minutes of the first session of the Eighteenth Annual Convention were read and approved. The President read a message from Mrs. R. E. Mosiman, President of the Woman's Auxiliary to the American Medical Association. Mrs. Allen H. Bunce gave the report of the meeting of the Auxiliary to the American Medical Association convention and Mrs. Chas. Usher read a report for Mrs. Olin S. Cofer of the Southern Medical Auxiliary convention.

The President instructed the Corresponding Secretary to write notes to Mrs. Fred Rawlings, Mrs. Eustace Allen and Mrs. Warren Coleman, regretting their absence.

Dr. J. N. Brawner and Dr. W. R. Dancy, with Dr. B. H. Minchew, appeared as a committee to invite the Auxiliary to hear the address of the President, Dr. Allen H. Bunce, and to attend the Memorial Exercises. Mrs. J. N. Brawner moved the Auxiliary thank Dr. Minchew and accept the invitation. Seconded by Mrs. C. W. Roberts. Motion carried. Dr. J. N. Brawner, chairman of the Advisory Committee to the Woman's Auxiliary gave his annual report.

Mrs. Lee Howard introduced Dr. W. R. Dancy, who gave a short talk.

Dr. J. N. Brawner introduced Dr. J. A. Redfearn, President-Elect of the Medical Association of Georgia. He spoke on "Our Nutritional Needs."

Dr. Minchew announced a three-act play by the Atlanta Theater Guild, "The Story of Anesthesia," to be given after the banquet Thursday evening.

Mrs. H. C. Sauls, staff assistant of the Atlanta Red Cross, invited and urged attendance at a "World Affairs' Symposium" to be held May 4, in Atlanta.

The President introduced the following district managers:

Mrs. Carl Savage—Third District.
Mrs. Y. H. Yarbrough—Sixth District.
Mrs. W. A. Flanagin—Eighth District.
Mrs. W. T. Randolph—Ninth District.

Also, Mrs. Lucius N. Todd and Mrs. Claude E. Tessier, chairmen of arrangements for the convention.

The President appointed the following com-

mittee to approve the minutes of the second session: Mrs. Carl Savage, Mrs. W. T. Randolph, Mrs. W. M. Flanagin.

Mrs. E. S. Sanderson and Mrs. Joseph Ackerman conducted memorial services in memory of: Mrs. Roberta H. Little, Milledgeville; Mrs. G. T. Canning, Athens; Mrs. H. I. Reynolds, Athens.

Committee reports were as follows:

President-Elect, Chairman of Organization, Mrs. J. Lon King.

First Vice President, Chairman Health Education, Mrs. W. A. Selman.

Third Vice President, Chairman of Scrapbook, Mrs. J. R. McMichael.

Corresponding Secretary, Mrs. Chas. Usher; Treasurer, Mrs. Bruce Schaefer; Auditing, Mrs. J. B. Dillard; Historian, Mrs. Ralph Freeman; Public Relations, Mrs. H. M. Kandel; Health Films, Mrs. Leo Smith; Doctors' Day, Mrs. Y. H. Yarbrough; Research in Romance of Medicine, Mrs. C. L. Ayers; Jane Todd Crawford Memorial, Mrs. W. G. Elliott.

The meeting adjourned at 11:50 to hear the address of Dr. Allen H. Bunce and to attend the memorial exercises. The meeting reconvened at 1:15 P.M.

The Revision Committee, through Mrs. Ralph Chaney, moved that the by-laws Article 3, Section 3 on Committees, be amended by substituting for "Health Films," "Visual Education." Motion adopted.

Awards Committee, through Mrs. Chas. Mulherin, chairman of Exhibits and Awards, gave a report and announced that the special judging committee, Mrs. J. R. McMichael, Mrs. H. E. Griggs and Mrs. H. M. Kandel, had made the following decisions for the Mrs. J. Bonar White Awards:

Exhibits Award—Randolph-Terrell Auxiliary.
Scrapbook—Baldwin County Auxiliary.

These awards were presented by Mrs. Chas. Mulherin.

Mrs. H. G. Banister, chairman of the Mrs. James N. Brawner Trophy, reported that Richmond County Auxiliary had won the Brawner Cup with a score of 100 points. Ware County and Baldwin County tied for second place with a score of 95 points each.

Mrs. J. R. McMichael, Third Vice President, occupied the President's chair while the President, Mrs. Lee Howard, gave her report of the year's work.

Mrs. L. W. Williams gave her report of the Student Loan Committee and presented recommendations which were referred, upon motion of Mrs. J. N. Brawner, to the Post-Convention Executive Board meeting.

Mrs. Ralph H. Chaney gave a final report of the Credentials Committee.

Final Report

State Officers	14
State Chairmen	7
District Managers	8
County Auxiliary Presidents	10
Delegates	15
Alternates	3
Members-at-Large	3
Members	58
Guests	18

Mrs. Louis Smith gave a report of the Courtesy Committee which was accepted and placed on file.

Mrs. H. G. Banister, chairman of Nominating Committee, gave the following report:

President-Elect—Mrs. Bruce Schaefer, Toccoa
First Vice President—Mrs. H. M. Kandel, Savannah
Second Vice President—Mrs. W. G. Elliott, Cuthbert
Third Vice President—Mrs. Ralph Fowler, Marietta
Historian—Mrs. J. R. McMichael, Quitman
Recording Secretary—Mrs. J. C. Metts, Savannah
Treasurer—Mrs. Lucius N. Todd, Augusta

There being no nominations from the floor, the Secretary cast the ballot. The President declared the ticket of officers as presented by the Nominating Committee elected. President-Elect, Mrs. J. Lon King, announced Mrs. Wallace Bazemore, Macon, Corresponding Secretary, and Mrs. S. T. R. Revell, Louisville, Parliamentarian.

Mrs. Lee Howard installed the new officers, and Mrs. William R. Dancy presented the Past-Presidents' Pin to the retiring President, Mrs. Lee Howard.

The new President, Mrs. J. Lon King, announced a meeting of Post-Convention Executive Board at 2:45 P.M. in room 641 of the Bon Air Hotel.

There being no further business, the President declared the Eighteenth Annual Convention of the Woman's Auxiliary to the Medical Association of Georgia adjourned at 2:00 P.M.

Approved by Mrs. Carl Savage, Mrs. W. T. Randolph, Mrs. W. M. Flanagin, April 30, 1942.

May duBignon Howard, *President.*
(Mrs. Lee Howard)
Ruth M. Metts, *Recording Secretary.*
(Mrs. J. C. Metts)

Post-Convention

Post-Convention Executive Board meeting was called to order by the President, Mrs. J. Lon King at the Bon Air Hotel, Room 641, April 30, 1942, at 3:30 P.M.

The meeting opened with a prayer by the President.

Mrs. King announced that nutrition would be stressed again this year.

The President announced the following committees:

Press and Publicity—Mrs. J. Harry Rogers, Atlanta
Public Relations—Mrs. Dawson Allen, Milledgeville
Legislation—Mrs. C. C. Harold, Macon
Visual Education—Mrs. Leo Smith, Waycross
Doctors' Day—Mrs. L. R. Massengale, Lumpkin
Research in the Romance of Medicine—Mrs. W. T. Randolph, Winder
Jane Todd Crawford Memorial — Mrs. Ralph Chaney, Augusta
Revisions—Mrs. J. N. Brawner, Atlanta
Archives—Mrs. Eustace A. Allen, Atlanta
Exhibits and Awards—Mrs. Edgar Shanks, Atlanta
Mrs. James N. Brawner Trophy — Mrs. Lee Howard, Savannah

The following delegates were appointed:

For the convention of the Woman's Auxiliary to the American Medical Association:

Mrs. J. Lon King, Mrs. Bruce Schaefer, Mrs. L. W. Williams, Mrs. Eustace Allen and Mrs. Allen H. Bunce.

For the Woman's Auxiliary to the Southern Medical Association convention:

Mrs. Allen H. Bunce.

Mrs. L. W. Williams, retiring chairman of the Student Loan, made the following recommendations:

1. That a statement of indebtedness be sent to each student owing money to the fund at the beginning of each year by the chairman.

2. The committee recommends to waive the interest on the last three years of the loan of a doctor because three years previously he had written for his standing and had never received an answer.

3. That applicants to the Student Loan Fund be notified that in the event of their marrying while still in medical school, no further loans will be available to them from the fund.

These recommendations were adopted.

Mrs. H. G. Banister was elected chairman of the Student Loan Committee. Mrs. Claude Tessier, Augusta, and Mrs. H. C. Sauls, Atlanta, were elected to serve with her.

Mrs. Lee Howard moved that the President be authorized to purchase copies of new hand books for all officers and chairmen of standing committees. Seconded by Mrs. Chaney, The motion carried.

Ruth M. Metts, *Recording Secretary*
(Mrs. J. C. Metts)

NEWS ITEMS

Dr. M. E. Winchester, Brunswick, Glynn County Commissioner of Health, returned recently from Chicago where he was presented with a plaque on behalf of Glynn County for its outstanding achievements in public health work by the U. S. Chamber of Commerce. Since the county has received two awards previously, it will be barred from future contests. On his return from Chicago, he was a guest at a luncheon given by Hon. Robert F. Maddox, Atlanta, president of the Georgia State Board of Health.

Dr. and Mrs. Horace Darden celebrated their 60th wedding anniversary at their home Sunday in Sparta, surrounded by children, grandchildren and friends. Mrs. Darden also celebrated her 84th birthday Sunday, while Dr. Darden celebrated his 84th on last January 11th. The beloved couple have lived in Sparta most of their married life. Dr. Darden is the oldest living graduate of the University of Georgia School of Medicine in Augusta, having been a member of the class of 1879. His father, also a graduate of the same medical college, was a member of the class of 1849—just 30 years before his son's graduation. Dr. and Mrs. Darden have two children living, Mr. W. W. Darden, of Union Point and Mrs. Will Bell, of Sandersville; also several grandchildren. Two sons are dead.
—Herald-Journal, Greensboro, Ga., April 24, 1942.

Dr. J. L. Morris, Alpharetta, announces the opening of a maternity clinic.

Dr. Frank K. Boland, Atlanta, professor of clinical surgery at Emory University School of Medicine, has been re-elected president of the Emory Alumni Association.

The Georgia Medical Society, Augusta, met on June 9. Dr. W. W. Anderson, Atlanta, spoke on *Lung Cysts;* Colonel Bennett G. Owens, M.C., spoke on *The Duties of the Procurement and Assignment Board.*

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, June 15. Titles of scientific papers on the program were: *Breast Tumors* by T. C. Davison, discussed by Dr. Wm. Perrin Nicolson, Jr., and Dr. J. Elliott Scarborough; *Dacryocystorhinostomy*, Dr. Alton V. Hallum, discussed by Dr. J. Mason Baird and Dr. Lester A. Brown. Contributors to this issue of The Bulletin were: Dr. E. A. Stead, Atlanta, *The Teaching Program of the Department of Medicine at Emory University;* Dr. W. Kendrick Purks, Vicksburg, Mississippi, *The Internist's Responsibility Regarding Surgical Problems of the Geriatric Patient;* Dr. W. B. Clark, New Orleans, *Anterior Segment Eye Diseases.*

Dr. W. H. Lewis, Rome, chairman of the Floyd County Commissioners, in a recent address urged the members of the commission to provide a full time health officer for Floyd County and that offices for the clinic could be opened in the Floyd County Hospital.

Dr. Benjamin Bashinski, Macon, resigned his position in charge of the Junior League Well Baby Clinic which he has attended for 13 years. Dr. S. E. Patton and Dr. C. Hall Farmer have agreed to serve.

Dr. Philip H. Nippert and Dr. William L. Dobes announce their association in the practice of dermatology with offices in Suite 514 Doctors Building, Atlanta.

The Medical and Surgical Staff of the Georgia Baptist Hospital, Atlanta, met in the dining room of the

Nurses' Home on June 16. Dr. F. C. Holden was in charge of the Clinicopathologic Conference. Dr. B. L. Shackleford is secretary of the hospital staff.

DR. GRADY N. COKER, Canton, was initiated June 15 into the Alpha Omega Alpha, national fraternity of the medical profession, the highest honor the profession confers upon its members.

DR. W. W. ANDERSON, Atlanta, was a guest speaker before the Georgia Medical Society, Savannah, June 23, on *Lung Cysts.*

DR. M. L. MALLOY, Nienna, announces the opening of an office in the Taylor Memorial Hospital, Hawkinsville, for the practice of medicine on Mondays, Wednesdays and Fridays; and will maintain his office in Nienna for practice during the other days of each week.

DR. LESTER HARBIN, Rome, president of the Floyd County Medical Society, announced that the Society had endorsed a plan to employ a joint city and county physician. He would serve only the city and county patients and would not do any private practice.

THE EMORY MEDICAL ALUMNI ASSOCIATION at the close of its 21st annual meeting held at the Academy of Medicine in Atlanta elected officers as follows: President, Dr. Walter C. Jones, Miami; First Vice President, Dr. Spencer A. Kirkland, Atlanta; Second Vice President, Dr. Russell Thomas, Americus. New members of the Board of Trustees are: Dr. W. K. Purks, Vicksburg, Miss.; Dr. J. D. Martin and Dr. C. W. Strickler, Jr., both of Atlanta.

DR. F. M. MULLINO, Montezuma, attended the reunion of the class of 1892 of Emory University School of Medicine (originally the Southern Medical College, Atlanta). He has been practicing for more than 50 years. Of the 34 members of the class, only 6 are now living and 4 of them were present.

DR. ALLEN H. BUNCE, Atlanta, was an invited guest and principal speaker at the commencement exercises of the University of Georgia School of Medicine, Augusta, June 15. He stated that Georgia's present and future need were a State teaching general hospital located in Augusta.

THE FULTON COUNTY MEDICAL SOCIETY met at the Academy of Medicine, Atlanta, July 6. Titles of papers on the scientific program were: *Constipation* by Dr. T. Sterling Claiborne; discussed by Dr. Hugh Wood and Dr. Wm. E. Mitchell. *Late Treatment of Deep Burns and Contractures*, Dr. J. H. Kite; discussed by Dr. J. D. Martin and Dr. Calvin Sandison. This number of the Bulletin carries the names, telephone numbers with office and residence addresses.

THE FULTON COUNTY MEDICAL SOCIETY honored Dr. Jas. E. Paullin, Atlanta, president-elect of the American Medical Association, at a testimonial dinner at the Piedmont Driving Club on July 7.

OBITUARY

Dr. Victor Emanuel Kea, Atlanta; member; Emory University School of Medicine, Atlanta, 1918; aged 52; died on May 20, 1942, at his home after an illness of short duration. He was born near Dublin in Laurens County. Dr. Kea served in the Medical Corps of the U. S. Navy during the First World War. Has been actively engaged in general practice, enjoyed the confidence and esteem of many acquaintances since he began private practice. Surviving him are his widow; three sisters, Mrs. Myrtle Mason and Mrs. Helen Dekle, Jacksonville, Florida; and Mrs. Jack Flanigan, Houston, Texas. Funeral services were conducted at the Kea church near Dublin. Burial was in the churchyard.

Dr. Edmund Lee Awtry, Atlanta; Southern Medical College, Atlanta, 1896; aged 74; died May 22, 1942. He was a native of Richmond County and had practiced medicine for more than 40 years. He was an active member of the Fortified Hills Baptist Church. Rev. W. J. DeBardeleben and Rev. Wm. S. Wier officiated at the funeral services conducted at the chapel of Awtry and Lowndes. Burial was in West View Cemetery.

Dr. Jake Cobb Orr, Buford; member; Atlanta School of Medicine, Atlanta, 1912; aged 56; died May 16, 1942, suddenly while making a call to see a patient. He had been a loyal member of the Gwinnett County Medical Society for many years. Dr. Orr had an extensive practice and was held in high esteem by many acquaintances. Surviving him are two sons, J. Harold Orr, Atlanta; and Edwin Orr, Lawrenceville; one granddaughter, Linda Fae Orr; two brothers, Russ Orr, Ware, Mississippi; and Bartow Orr, Rossville, Mississippi; three sisters, Mrs. Elbert Edwards, Mrs. Ed Crowe, and Mrs. E. T. Chipley, all of Rossville, Mississippi. Rev. D. L. Haygood and Rev. H. C. Whitener officiated at the fueneral services conducted at the Methodist church. Interment was in the Buford cemetery. Members of the Gwinnett County Medical Society were honorary pallbearers.

Dr. Ein Collum, Springfield; Atlanta College of Physicians and Surgeons, Atlanta, 1906; aged 61; died May 21, 1942 of paralysis. He was sick for only two days. Dr. Collum began practice at Herod, then practiced several years at Ellaville, later moved to Springfield where he remained in active practice until his death. He was a good citizen and usually active in all civic affairs. Surviving him are his widow; one daughter, Miss Dorothy Collum; one son, Julian Collum; three sisters, Mrs. Homer Rawls, Misses Mildred and Susie Collum, Buena Vista. Funeral services were conducted from the Springfield Methodist church.

SUMMER DIARRHEA IN BABIES

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SYMPOSIUM ON PSYCHOSES AND PSYCHONEUROSES

ELECTRIC SHOCK THERAPY IN PERSONALITY DISORDERS

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Augusta

It is the purpose of this paper to report an experience with electric shock as a means of treatment for psychiatric patients admitted to a general hospital and cared for in the wards with regular medical patients. Our material consists of 67 consecutive patients, all of whom showed personality disorders considered serious enough to indicate drastic measures of treatment.

Method

The apparatus used is similar to that described by Cerletti and Bini[1] and by others.[2,3] This apparatus is plugged into a socket supplied by ordinary city current, which in our experience was an alternating current of 110 volts and 60 cycles per second. The two electrodes are placed one on each temple of the patient. A jelly similar to that used in making electrocardiograms is used on the skin and the electrodes and moistened with 20 per cent saline solution in order to give a good contact. With the electrodes in place the operator can, by pushing a button, read the resistance of the circuit which in our experience usually varied from 400 to 1,000 ohms. The voltage to be administered is then determined by turning a knob. In general the higher the resistance of the circuit through the patient's head is found to be, the higher the voltage decided upon, but our patients varied so widely in the milliamperage necessary to produce a convulsion that we seldom, in beginning with a new patient, used less than 70 volts or more than 80.

The apparatus is so constructed that, when adjusted for treatment, on the pulling of a switch it delivers an alternating current through the patient's head for an exact period of 0.1 second, 0.15 second or 0.25 second. With new patients we always began treatment with a period of 0.1 second. When the switch is pulled and treatment administered a needle on the apparatus registers in milliamperes the exact quantity of current to which the patient is subjected. In the present series of patients a convulsion was never obtained with less than 450 milliamperes and occasionally 1,500 milliamperes failed to produce a convulsion even when applied for 0.25 second.

This experience is at variance with that of Gonda[3], who writes of obtaining convulsive reactions with 250 milliamperes and who states, "It has been proven that the 800 milliampere limit need never be reached for effectiveness." Those patients who failed to respond with a convulsive reaction when a current of 1,500 milliamperes was applied for 0.25 second nearly always reacted satisfactorily when this current, or even a smaller current, was applied twice in rapid succession by pulling the treatment switch a second time as quickly as possible after the first. No patient failed consistently to react with a grand mal seizure when this was done, but two patients in our series each failed on one occasion.

Plan of Treatment

The patients were treated with electric shock three times a week. In all but one case our aim was to apply sufficient current to produce a grand mal seizure at each treatment. In order to accomplish this it was often necessary, especially at the first

From the Departments of Neuropsychiatry and Internal Medicine, University of Georgia School of Medicine.
Read before the Medical Association of Georgia, Augusta, April 29, 1942.

treatment, to repeat the shock. Patients who failed to undergo a grand mal seizure lost consciousness and often showed twitching and minor unsynchronized muscular jerks. After an interval of one to a few minutes a second treatment was given, the voltage being increased by ten volts and, sometimes, the duration of the shock being also increased.

If the second shock did not produce the grand mal seizure the patients with considerable regularity showed signs of a clearer sensorium than after the first shock. In fact, the second shock seemed very definitely to arouse or partially to arouse the patients from the coma which the first shock had produced. If the second shock failed, it was our rule to apply a third. Occasionally the treatment was administered four times in succession on a single day.

On the days when patients were not given electric shock insulin was administered in doses insufficient to produce a coma but sufficient to produce hunger and sweating.

The patients were hospitalized for an average time of 16 days and an average of seven convulsive-producing shocks was given. Thirteen was the largest number of convulsions produced in a patient during a single course of treatment though several patients were readmitted for a second course and two patients received the course three times. One patient required only a single treatment to produce full remission and received treatment only once.

Treatment was given in the morning on an empty stomach and after premedication with atropine gr. 1/150. The atropine appeared to be of value in diminishing saliva and froth in the mouth and respiratory passages and perhaps served as a respiratory stimulant and an influence against the possible danger of laryngeal spasm which has been observed as a complication of metrazol therapy.[4]

Reaction of the Patients Undergoing Treatment

None of the patients expressed fear of the treatment although a few, who were consistently uncooperative and showed resistance to other details of the hospital routine, occasionally objected on general grounds while preparations for giving the shock were being made. Those who received treatment regularly said that no pain or other unpleasant sensation was experienced and that they remembered nothing except having gone to sleep. The shock is apparently so sudden in its effects that consciousness is lost too quickly for perception of it to arise. The harrowing sense of anguish and terror reported by patients treated with metrazol as a prelude to the seizure was never mentioned.

With the application of the current the patient often responds with a quick generalized muscular contraction which not infrequently tends to flex the trunk. Sometimes, however, this is absent or not appreciable. Usually an interval lasting from ten seconds to twenty seconds (very rarely to one minute) precedes the tonic-clonic convulsion, which, though similar to that produced by metrazol, impressed us as being definitely less vigorous.

At the end of the seizure, which seldom lasts over 45 seconds, a period of apnea occurs and there is often a mild or moderate degree of cyanosis. Contrary to the reports of some other observers[5, 6] the period of post-convulsive apnea has regularly been less prolonged and less alarming in our experience than with metrazol therapy. The possibility that premedication with atropine assisted our patients in the prompt reestablishment of respiration is to be considered, though Myerson[7] who did not mention its use also found a shorter period of apnea with electric shock.

A variable period of unconsciousness followed the seizure. Disturbed, delirious reactions with violent struggling were less frequent and less intense than after metrazol therapy but occasionally these were noted. Nausea and headache were seldom mentioned by the patient and when present were definitely milder than in metrazol treatment. After the patient had apparently regained consciousness a mild disturbance in orientation and recent memory often persisted for periods ranging from a half hour to several hours. All patients after receiving electric shock showed immediately a definite and usually a pronounced, transient

injection of the blood vessels of the ocular conjunctiva. This was as pronounced when no convulsion occurred as after the convulsion.

Complications and Precautions

In the treatment of these 67 patients approximately 500 grand mal seizures were obtained. The patients varied in age from 16 years to 66 years. Several of the older patients showed retinal arteriosclerosis and electrocardiographic evidence of moderate myocardial damage. One elderly patient (involutional melancholia) showed severe myocardial damage and had previously been in a state of cardiac decompensation. This last patient was given sub-convulsive shock but on one occasion responded with a seizure. She made a recovery from the psychosis and apparently suffered no adverse physical effects from the treatment. None of the other older patients showed adverse effects from the treatment except occasionally a temporary mild confusion about details that always cleared up within a few days.

On only one occasion was there a transient complaint of back pain. The roentgenogram showed no evidence of vertebral fracture and the pain disappeared entirely within three days despite the administration of further shock treatment. One serious complication occurred in our entire experience with electric shock therapy, a fracture of the neck of the humerus in a woman 59 years old. The patient's arm in this instance was pulled by the seizure into a position of marked abduction. We have subsequently modified our method of immobilizing patients during treatment so that we believe a similar complication in the future will be extremely unlikely.

Since in our previous experience with metrazol therapy we noted that compression fractures of the vertebrae, with one exception, occurred only when a preliminary sudden flexion of body occurred, we avoid such a motion by fixing the patient on a firm stretcher.

A rolled pillow is placed under the dorsal region of the back. Two wide web straps are passed around the patient and the stretcher, one going over the right shoulder and under the left arm in the axilla, the other vice versa. A third strap is placed around the pelvis fixing it firmly to the stretcher. A fourth strap binds the thighs just above the knees to the stretcher. A fifth strap is passed around the body and stretcher just above the elbows and made sufficiently tight to prevent abduction of the arms. With the patient thus immobilized in a position of moderate opisthotonus it has been impossible for any appreciable anteflexion of the spine to occur. The recent report by Worthing and Kalinowsky[8] giving strong evidence that this motion is the most important factor in causing spinal injuries, accentuates the need of taking full measures to prevent such anteflexion. Though electric shock does not produce such violent, sudden flexions as we have observed in metrazol treatment, we have frequently seen them occur at the moment the current was applied. We are convinced that if the patient is fixed to a rigid stretcher as described above this sudden motion can be more adequately prevented than by having assistants seize and hold the patient as is usually recommended.[3,9]

Since we have, with metrazol, observed one serious instance of compression fracture in which no discernible anteflexion occurred, we feel that on some occasions damage may be caused by the repeated hammering of the vertebrae together by the clonic contraction of the paravertebral muscles. Rechtman[10] has presented an argument that such trauma, rather than jack-knifing, causes compression fractures in convulsive therapy. In an attempt to minimize this factor we pass a folded sheet under the patient just below the shoulders and bring it up through the axillae. A moderate but steady pull towards the head of the stretcher on the two ends of the sheet and a similar pull in the other direction on another folded sheet passed around both ankles tends, we believe, to damp substantially the force with which the vertebrae can be pounded against one another. Thick pads of felt are placed in the axillae to prevent any trauma to the brachial plexus from this moderate traction.

Despite the relative infrequency of ver-

tebral fractures and other fractures in electric shock therapy as compared with metrazol therapy, there is no doubt that they sometimes occur,[5 9 11] and we believe that it is important to take the strongest measures to prevent them.

Results of Treatment

Our 67 patients fall into the following diagnostic groups:

Schizophrenia	28
Involutional Melancholia	9
Manic Depressive Psychosis	8
Paranoid Psychosis	2
Other Psychoses	6
Psychopathic Personality	6
Psychoneurosis	8

The patients classified as schizophrenia when subdivided into types appear as follows:

Schizophrenia:	
Hebephrenic Type	16
Catatonic Type	7
Paranoid Type	2
Mixed Type	3

Of the 16 patients of hebephrenic type, seven showed remission of the psychosis and returned to their ordinary occupations free of symptoms. Less than a year has elapsed since treatment so we do not feel that we can pronounce them as having undergone a lasting cure, but at present they are making a good adjustment. Only three of the seven show what we regard as full insight and are entirely free of all characteristics ordinarily associated with non-psychotic schizoid type of personality.

Of the seven catatonic patients four obtained full remission and show no evidence at present of a psychosis. One of these required three courses of treatment and another two courses. A fifth patient has shown sufficient improvement to return to her ordinary activities but has not, in our opinion, had a full remission. The other two patients, although they showed temporary improvement, were not lastingly or substantially benefitted.

The two paranoid types must be classified as failures notwithstanding the fact that one showed marked symptomatic improvement for five months after the treatment.

Two of the three patients classed as mixed or indeterminate in type are still in remission, while the other gained no important lasting benefit.

All the patients with schizophrenia who achieved a remission lasting to the present time were relatively early cases (less than six months in duration). A few patients, who had for several years shown not the complete picture of developed schizophrenia but many unmistakable signs, have retained a substantial improvement to the present.

Of the nine patients with involutional melancholia seven promptly attained full remissions which persist to the present time. Three of these were relatively old cases, the psychosis having been present from one year to 2½ years. Of the two patients who did not recover, one had evidence of marked retinal arteriosclerosis and, in our opinion, her personality disorder was colored by the effects of cerebral arteriosclerosis.

Of the eight manic-depressive cases, five achieved prompt and full remissions which have persisted. All of these who fully recovered were depressed or depressed and agitated types and one showed strong paranoid coloring. This last mentioned patient, in addition to her depression and agitation, believed her neighbors were spying on her and that an organized scheme to persecute and destroy her was functioning. She presented as many features of paranoid schizophrenia as of manic depressive psychosis. Of the other three, one, a manic type who had been psychotic for more than four years, improved greatly and is able to carry on her normal activities without supervision. Another patient completely recovered from her depressed psychosis but several weeks later developed mild manic symptoms for which she cannot be persuaded to take treatment. The remaining patient, a very atypical case with schizoid coloring, showed slight improvement, if any.

Neither of the paranoid psychoses showed any lasting change. Both of these patients had been psychotic for more than five years.

The six cases classed as *other psychoses* included one patient who might have been justifiably diagnosed either schizophrenia or acute alcoholic hallucinosis. He made a full recovery. In this group is found a

surgical patient who, after recovering from a minor operation, developed a confusional psychosis with catatonic features. He recovered completely. A third patient had been entirely disabled for eight months, and admitted auditory hallucinations. After one treatment she recovered. Two of the other three patients were cases of marked mental deficiency with psychotic episodes. One recovered from the episode, the other was not substantially affected. The third patient was not improved.

Of the six patients listed under psychopathic personality three have outwardly maintained a good adjustment since treatment. All three, however, prior to treatment had shown episodic rather than constant signs of personality disorder, and we believe that no judgment can yet be made of any possible benefits from therapy. The other three patients, all of whom showed a true semantic dementia, [12 13] were unimproved.

Of the eight patients with psychoneurosis, five showed important changes or full recovery. The sixth showed considerable improvement, the seventh and eighth (a mental defective) showed no lasting improvement. Two of the patients who achieved full remissions had been totally disabled and actively miserable for years and had been bed-fast for over six months prior to treatment.

Considering the entire 67 cases we find that therapy had the following results:

	Number	No notable Improvement	Definite Improvement	Remission
Schizophrenia:	28			
Hebephrenic 16		6	3	7
Catatonic 7		2	1	4
Paranoid 2		2	0	0
Mixed 3		1	0	2
—		—	—	—
28		11	4	13
Involutional Melancholia	9	2	0	7
Manic-Depressive Psychosis	8	1	2	5
Paranoid Psychosis	2	2	0	0
Other Psychoses	6	2	1	3
Psychopathic Personality	6	3	3?	0
Psychoneurosis	8	2	1	5

Discussion

The present study does not include a sufficient number of patients to produce statistical evidence of much import concerning the efficacy of electric shock therapy in serious personality disorders. We are encouraged, however, by the fact that a majority of the schizophrenic patients have shown improvement which at present seems definitely to justify the procedure. It must be admitted, of course, that some, perhaps many, of these patients may relapse.

In the affective psychoses, involutional melancholia and manic-depressive psychosis, our limited experience, like that of other observers, [1 2 3 5] indicates that electric shock treatment usually results in prompt recovery.

The paranoid psychoses and paranoid types of schizophrenia appeared to be, in general, unresponsive with the exception of one patient who showed a well organized persecutory delusional trend but who, because of a strongly marked emotional depression, was listed with the affective psychoses. The complete remission of this patient was particularly impressive.

We have been much encouraged by the results of electric shock in severe and persistent cases of psychoneurotic maladjustment and believe that this measure is indicated when the degree of disability and suffering is great.

In the so-called psychopathic personalities we cannot list any changes, or apparent changes, of sufficient duration to carry conviction, but we believe that it is worth while to continue treating such patients until further experience throws more light on the results.

Summary and Conclusions

1. In 67 patients with serious personality disorders treated by electric shock in a general hospital, a majority showed either prompt remission or definite improvement which has persisted. We are encouraged by the results not only in the affective psychoses, nearly all of whom recovered, but also in schizophrenia, where a majority of those treated showed sufficient benefit, in our opinion, to justify the procedure. Patients with severe and persistent psychoneuroses were often substantially and sometimes spectacularly benefited.

2. In addition to electric shock, which constituted the chief means of therapy, our patients were given insulin. This was not given in sufficient amount to produce coma but, we believe, served a useful purpose in increasing appetite and relaxing patients on the days when they did not receive electric shock. We believe that the insulin given in this way did not play a major part in the recovery of the patients reported here, since we did not find similar results with similar patients when insulin was given alone in doses not sufficient to produce coma.

3. In a series of approximately 500 electrically-induced grand mal convulsions, only one complication arose: a fracture of the humerus. This occurred before our present method of preventing fractures was fully developed.

4. Precautions against complications in therapy have been described.

REFERENCES

1. Cerletti, U., and Bini, L.: L'elettroschock. Arch. gen. de neurol. psichiat. e psicoanal., 19:266-268, 1938.
2. Kalinowski, L., and Barrera, S. E.: Electric Convulsion Therapy in Mental Disorders, Psychiatric Quart., 14:719-730, 1940.
3. Gonda, V.: Treatment of Mental Disorders with Electrically Induced Convulsions, Dis. of the Nerv. System, 2:3-11, 1941.
4. Barbato, L.: Metrazol Therapy of Schizophrenia, Texas State J. of Med., 34:220-227, 1938.
5. Androp, S.: Electric Shock Therapy in the Psychoses: Convulsive and Sub-Convulsive Methods, Psychiat. Quart., 15:730-749, 1941.
6. Kalinowski, L.; Bigelow, N., and Brikates, P.: Electric Shock Therapy in State Hospital Practice, Psychiat. Quart., 15:450-459, 1941.
7. Myerson, A.: Experience with Electric Shock Therapy in Mental Disease, New Eng. J. of Med., 224:1081-1085, 1941.
8. Worthing, H. J., and Kalinowsky, L. B.: The Question of Vertebral Fractures in Convulsive Therapy and in Epilepsy, Am. J. of Psychiat., 98:533-537, 1942.
9. Smith, L. H.; Hughes, J.; Hastings, D. W., and Alpers, B. J.: Electroshock Treatment in the Psychoses, Am. J. of Psychiat., 98:558-561, 1942.
10. Rechtman, A. M.: The Mechanism of Fractures of the Vertebral Bodies, Am. Jour. of Psychiatry, 96:1429-1439, 1940.
11. Fleming, G. W. T. H.: Electrically Induced Convulsions, Proc. Royal Soc. Med., London, 33:265-267, 1940.
12. Cleckley, H.: The Mask of Sanity, C. V. Mosby Co., St. Louis, Mo., 1941.
13. Cleckley, H.: Semantic Dementia and Semi-Suicide. Accepted for publication by The Psychiatric Quarterly.

Acute trachoma, a contagious granular inflammation of the membrane that lines the eyelids and covers the eyeball, can be treated so successfully that less than 1 per cent of the eyes infected will become industrially blind, Harry S. Gradle, M.D., Chicago, declares in *The Journal of the American Medical Association* for July 4 in a report on the visual results obtained in the trachoma clinics of southern Illinois. His report lists the results from treating two groups of patients in stages 1 and 2 of the disease, 328 eyes in one group being treated with sulfanilamide and 493 eyes in the other group being treated by other means.

"From the final visual standpoint," he says, "systemic treatment with sulfanilamide is preferable to purely local treatment because: (a) twice as many eyes show definite improvement in vision and (b) less than half as many eyes show positive losses in vision."

CHRONIC FATIGUE STATES

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The subject with which I propose to deal is not new, nor are these observations original. Since the time of Hippocrates physicians have noted the relation between fatigue and illness, and have recorded the salutary effects of rest in the healing of disease. As a class, they should have a close interest in fatigue. The nature of their professional responsibilities entails long hours of work and interrupted periods of sleep. There is always the necessity for close attention and accurate coordination in the highly technical procedures which they carry on. Finally, there is the ever present necessity for self control forced on them by the annoying situations which every practitioner must face. Small wonder then that from personal experience they have a deep insight into the complaints of their tired, querulous, exhausted patients; and perhaps are often tempted to say "I have every damn thing you have griped about for the past hour." But the condition is not of interest to them alone. Since Jap Sunday the nation is beginning to be conscious of the Herculean task it has undertaken; and with the passing of time we shall become increasingly aware that ahead there lies a long exhausting struggle which will require all our energies if we are to be ultimately successful. Sad experience already has grimly demonstrated that this is a total war, of men, of guns and goods. In it there must be long hours of hard work on the production lines as well as at the front. For this reason perhaps a paper on fatigue states might be justified.

Chronic fatigue states represent no definite clinical entity, and a definition cannot be compressed into a few words. In this paper I shall attempt to discuss the symptom-complex presented by people who complain of mental and physical depletion, or both; including those who are chronically nervously exhausted, as well as that group with chronic fatigue who do not recover with

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ordinary rest. Fatigue has been variously defined by physiologists as a diminished capacity for work, other conditions remaining constant.[1] A break in organic equilibrium, and to use the terminology of Cannon, "a deficiency of homeostatic force." Many excellent papers on the subject have been published by physiologists; the group working at the fatigue laboratories at Harvard University, and by our industrial surgeons. A common conclusion of all is that there is no definite physiologic basis for chronic fatigue. The increase in lactic acid formation in the muscles which follows strenuous physical effort is absent, nor are there any other physiologic or chemical changes present to differentiate it from the normal state. There is a very definite psychologic factor. Familiar to most of you is the disappearance of that tired feeling when the dogs locate a "sundown covey" of quail; or that pickup in your golf when contemplating the nineteenth hole on a hot summer day.

While the knowledge of the physiology of fatigue is vague, we have made some progress in uncovering its etiology, for complaints of fatigue are notoriously common, are often associated with organic disease, and sometimes may explain the persistence of symptoms long after recovery from other physical illness. Fatigue states can be roughly divided into two groups: The worker of whatever type, whose energy is lessened and whose efficiency is decreased as a result of long continued effort; and the individual whose energy expenditure is little, but who is always tired and exhausted, and who is never able to accomplish a great deal.

The first group has been the object of very extensive studies by physiologists and those interested in industrial medicine. A very excellent paper was recently published by Ivey,[2] one portion of which dealt with the subject we are attempting to discuss. He stated that an ordinary workman with an adequate diet was capable of performing a certain amount of work, which varied somewhat but represents an efficiency of about 10 per cent. As might be expected there were many modifying factors, among which were the type of work performed, the monotony and the opportunity for recuperation. Efficiency was considerably increased when short periods of rest were given, and fell off when more than sixty hours of work a week were performed. Even here there was a strong psychologic element. The performance of a monotonous task in which the worker had little interest was apt to be tiring, while work behind which there was a driving urge to complete and in which the worker had an intense interest was much less so. This has been exploited to a considerable degree both in Germany and Russia where production for the State has been built up into a fanaticism that amounts to a religious fervor. But even there it was found that when the hours of work were too many, there was a steady falling off of production and a rise in the number of accidents, so that even in the Reich the number of hours has been reduced, and holidays given. Ivey noted further that a level of efficiency was increased and maintained when enforced rest periods, with an opportunity to take some food were given though there was some evidence that the effect of food itself was probably psychological. Another factor of considerable interest was that fatigue seemed lessened in men doing heavy labor when their drinking water was salted. Possibly the loss of chloride may play a rather important part.

The average physician probably has had little personal experience with chronic fatigue in industry, and that largely in patients who were probably exhausted from "hell-raising" around night clubs after getting off from work; but there are two other groups who present the syndrome quite frequently. The small farmer who owns his own land and does most of his work, but whose income will not permit of the acquisition of labor saving machinery; and women who work long hours in stores, take care of their own housework and care for children after returning home in the evening. The second division comprises a heterogeneous collection of individuals who complain of fatigue, though they expend little energy. In the beginning we must remember that early exhaustion and a

pathologic tendency toward becoming tired may be part of the clinical picture of organic illness, especially heart disease, nephritis and certain psychoses. Organic disease and chronic fatigue states may be coexistent, and one so overshadows the other that recognition of the clinical picture may be very difficult. If these can be excluded there will still remain a number of patients who are not ill but who complain of a lack of initiative and a failure of performance; and a second group in whom a desire for activity is present but in whom there is a lack of effectiveness. These are the people who tell us "I want to be active, I have my work to do, but I cannot get it done." They represent the borderline cases who, according to Muncie,[4] may be divided into endocrine metabolic disorders; post-infectious states and the emotional states and attitudes usually rather loosely grouped under the term neurasthenia.

In the endocrine metabolic group either a hyper or hypothyroid state may cause fatigue and weakness of severe and disabling sort, which may be present for a considerable time before other diagnostic signs appear. Early hyperthyroidism is especially apt to cause muscle weakness and fatigue, and a moderate elevation of the basal metabolism may be the only early manifestation of the disease. A mild hypothyroid state is rather common, and most of the tests we make give minus readings. Unfortunately, there are usually other factors present and spectacular relief from thyroid alone is unusual. Disturbances of the adrenal, especially Addison's disease, are rather uncommon but occur often enough to be looked for, and the prompt relief from desoxycorticosterone make it desirable that the rate case be recognized. The chronic fatigue and exhaustion that occur in hot weather have been studied by McCord and Ferenbaugh,[5] who found that under average conditions in hot weather the body would lose about three liters of fluid and 20 grams of sodium chloride. Under suitable conditions as much as six liters of fluid may be lost, with dehydration, gastic hypoacidity, acidosis, muscular fatigue and cramps. Replacement of fluid alone will not give relief but the addition of saline does, and this in their experience was best accomplished by the use of salinized drinking water.

Post-infectious states, especially those following influenza or undulant fever, will often leave a patient exhausted long after recovery from the original illness. Undulant fever, when mild, may go unrecognized for a long time, especially when the patient complains only of weakness, lassitude and inability to work. In cases where agglutination tests are negative, diagnosis may be extremely difficult and treatment even more so. Dysentery and endemic typhus are not infrequent in the South and both are severely depleting. In typhus especially the history is apt to begin with the statement, "I have not been well for two or three years since I had Brill's fever." Finally, there is another group who complain of chronic fatigue, in whom the most exhaustive examination will fail to show any evidence of organic disease. Almost every physician has at least one patient who was told by her doctor years before that she had a weak heart; and although probably forty physicians have subsequently assured her that she is normal she continues to cling to her ailment. In this group fatigue is not the result of some physiologic process but rather an expression of emotional instability, mental strains or conflicts, dissatisfaction with a monotonous regimen of life or chronic anxiety and fear brought on by some situation or problem which they cannot adequately meet. As a result there is a tendency to compensate by using some trivial ailment as an excuse for chronic invalidism, an attitude that unfortunately may become a parasitic habit at the expense of a long suffering family. Wherever possible this patient should be transferred to a neuropsychiatrist or to some one trained in psychosomatic medicine, instead of labelling him a "neurasthenic," a term that in itself is often expressive of the nihilistic attitude of the physician toward that particular individual.

Whatever its cause chronic fatigue always provokes a bizarre string of complaints which bear no definite relation to its etiology. In so indefinite a complex, descrip-

tions of discomfort are extremely varied and will depend somewhat on the makeup of the individual. Almost all complain of being tired, and unable to get anything done; but in addition they also mention stretching or yawning, drowsiness, inattentiveness, difficulty in remembering, irritability, peculiar fantastic ideas, impatience and hesitancy in speech. Drowsiness is especially common in men who perform long continued hard physical labor, and I well remember many years ago how the farmers who worked hard all week went to sleep first in church; and very vividly still, one pious uncle who disrupted service by swearing at his mules while snoozing in his Sunday school class. Women are usually affected differently and are more prone to migraine, indigestion, abdominal pain, backache, or insomnia, a fact stressed by Alvarez[6] in a number of his papers.

In so indefinite an illness as I have attempted to describe diagnosis is often difficult, and sometimes impossible. In people exhausted from long, laborious or monotonous work, coupled with an inadequate diet, recognition may be very prompt; but the nervous, highly strung individual who has been burning the candle at both ends is something entirely different. Nor is the problem made easier when it is associated with organic illness. In any case, a long careful and sometimes painfully elicited history is indispensable. This in itself may offer considerable difficulty in people who have gone to many physicians and who generally are much more interested in an "organ recital" exhibiting multiple prescriptions, or relating in detail the chiropractic diagnosis, than in any genuine effort to intelligently cooperate. To those of us who are not psychiatrists the appalling waste of time is often intensely annoying and it may be difficult to prevent some of this creeping into our own attitude especially when we see our only good patient leaving the office with his watch in his hand and black anger in his face.

But a life history, not merely one of physical discomfort, is only a beginning. In order to rule out organic disease there must follow a careful physical examination and chemical and metabolic estimations, most of which are quite likely to be barren of any objective evidence. Even when this is found there is always the problem of trying to weigh how much it has to do with the complaint. Admittedly, early psychoses and chronic anxiety states have caused me most confusion. Both are quite apt to mimic other illness, and considerable time may pass before the true nature of the illness is suspected.

In any case treatment must be a progressive affair based insofar as possible on the underlying cause. It must be varied with the changing state of the patient, taking into account his physical makeup, his way of life and his emotional stability. In fatigue states due to long continued physical work, or to a body endowed with less than the usual physical strength, the results of simple bed rest for a part of the day are often spectacular; but even rest must be an individualized prescription, for it is obviously useless to order the same thing for the farmer who is "ploughed down" after spring planting, and a housewife who is harassed by the care of numerous children. When organic disease is present care should be taken, unless it be of serious import, that not too much importance be attached to it, especially in those who may have something to gain by remaining ill. Too often a mild glandular imbalance or a few extrasystoles are given far more prominence than they deserve, and in glandular cases unless there is marked deficiency, therapy is particularly apt to be disappointing. For those who come in the domain of psychosomatic medicine a genuine effort must be made to understand their problem, to listen sympathetically and to give advice very guardedly. Drugs are least important. Vitamins, when not too expensive, do no harm and serve those patients who must be given something in order to get them to follow any regimen. Mild sedatives are often very helpful, especially in those who are taut and unable to sleep. In the group who awaken too fatigued to do anything in the morning, benzedrine sulphate during the early part of the day may give considerable relief. In any case one must be guarded as to the con-

clusions drawn, for improvement under any regimen will usually occur temporarily, possibly because of the large ingredient of hope and interest which any new prescription carries.

In conclusion, I have attempted to describe in a rather sketchy way an element that enters into the complaints of many of those who are chronically ill, an indefinite syndrome of varied etiology, causing no constant complaints and yet so often present that it cannot be lightly passed off. Chronic fatigue respects no station in life, masquerades under many disguises, aggravates many organic diseases and undoubtedly is often mistaken for other illness. Treatment must be based on a sympathetic understanding of the patient as a whole and an effort to lessen his daily load.

REFERENCES

1. Gillespee: The Present Day Physiologic Basis of Clinical Studies in Fatigue, J. Neurol. & Psychopath. 5:103-114.
2. Ivey: Physiology of Work, J. A. M. A. 118:569-573 (Feb. 21) 1942.
3. Dill, D. B.: Fatigue Studies Among Mississippi Sharecroppers, Harvard Alumni Bulletin (Oct. 20) 1939.
4. Mincie, Wendell: Chronic Fatigue, Psychomatic Medicine, pp. 276-285, (July) 1941.
5. McCord, Col. Carey P., and Ferenhaugh, Lieut. Col. Thos. L.: Fatigue in Soldiers Due to Chloride Losses, The Military Surgeon, vol. 69, no. 6, (Dec.) 1931.
6. Alvarez, Walter C.: Hints in Treatment of Gastro-intestinal Disease, Collected Papers of the Mayo Clinic, 29:157-158, 1937.

STILBESTROL TREATMENT FOR THE INVOLUTIONAL PSYCHOSES
(Distaff)

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Milledgeville

Involutional psychoses are about three times as frequent in women as in men. The fact that these psychoses do occur in men should always have some weight in appraising the benefits of a sex-linked treatment. Stilbestrol, a synthetic chemical, was introduced by Dodd et al as producing effects similar to the estrogenic hormones and having an added value of effectiveness perorally. The estrus being a female reaction pattern, the male counterpart is disregarded.

The involutional psychoses in women occur with or after the menopause, often after a delay of several years. There are two principal types, the depression and the paranoid. The depression or melancholia is the more predominant and presents positive qualities such as self-debasement and agitation and a prepsychotic personality of homely virtues with indecision as a reaction to superconscientiousness being the nearest approach to a personality defect.

A diagnosis is made by ruling out organic intellectual defects, toxic reactions, and nutritional deficiencies. The latter two conditions are also frequent complications. It is also customary to avoid a diagnosis of involutional psychosis if the condition is a recurrence of a psychosis of earlier life.

The rate of spontaneous recoveries was fixed by Kreaplin at 32 per cent within two years of onset, with 18 per cent dying, and 50 per cent becoming chronic. Further statistical studies have agreed closely with these figures.

Werner and associates in 1934 reported most optimistic results from treatment with theelin. Their results have not been equalled by others working with this hormone and most of the other reports have been distinctly disappointing. None of these reports, however, show the thoroughness and persistence of treatment as given in the Werner group. As stilbestrol has been substituted for theelin with a decided advantage in cost and the great convenience of oral administration, there has so far been no unusual enthusiasm for this drug as a curative agent for the involutional psychoses. There is, however, too much of a possible relationship between gonadal decline and the involutional period of life to warrant a neglect of estrogen-like substances in the treatment of the mental disturbances of this period.

With the advent of convulsive shock therapy for schizophrenia, this was soon tried on the involutional psychoses. The results were dramatic and beyond all expectations. Regardless of the duration of the illness, the promptness of response and relatively few treatments necessary for a good remission contrast sharply with the relatively large number of treatments and increasingly disappointing results in the more typical schizophrenia, and even in the

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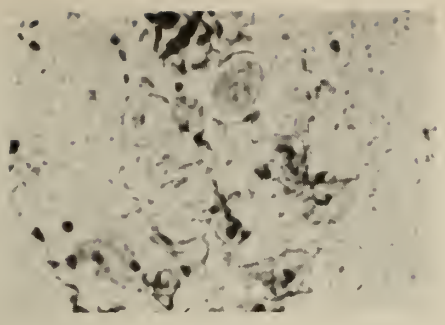


Figure 1
J. T. F., September 30, 1941, before Stilbestrol.

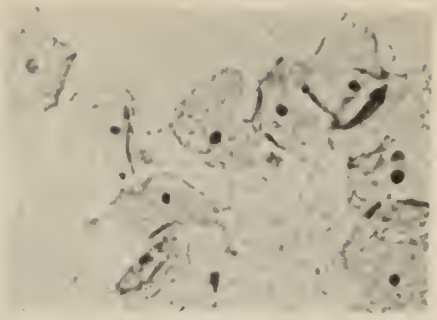


Figure 2
J. T. F., November 1, 1941, after Stilbestrol.

early treated manic-depressive psychoses. Withal, however, there are disappointments and recurrences in involutional psychoses.

My first use of stilbestrol was in January, 1940, in a series of seven castrate women patients. These patients were given one 1 mg. tablet daily by mouth without their knowing the nature of the drug; three of these patients received the drug in coffee, milk, or fruit juice so that they did not suspect that they were being medicated. One patient, an alcoholic who took the 1 mg. dosage less than two weeks, complained of lassitude and sleeping too well and accused me of giving her amytal. The six patients remaining under treatment all experienced nausea and vomiting within three weeks of continuous treatment, and the dosage was dropped to 0.1 mg. daily. In a four-week period of observation following the whole milligram daily dosage there were two nose bleeds and one vaginal bleeding. Another patient showed vaginal bleeding after one year and two months on a daily dosage of 0.1 mg. This bleeding, however, occurred after she had purchased the tablets from her druggist, and followed taking a box of twenty tablets ordered by phone, so that there could have been an error in dosage.

The following three cases are reported and include reports of vaginal smear reactions before and after daily dosages of 0.1 mg. of stilbestrol. The psychosis was in remission following electro-shock therapy in two patients. The smears of the third patient were taken while she was under observation, over a period of five months. Electro-shock therapy was withheld from this patient as it was felt that a heart murmur and a systolic blood pressure of 220 were contraindications to such treatment. With improved physical state and the blood pressure decreasing to 160, she was given electro-shock with good results, but too recently for follow up slides to be made.

Time permitting, additional slides will be shown in somewhat parallel cases, and control slides from a psychoneurotic, aged 35, menstruating on 28 day cycle.

Report of Cases

Case 1. (1248 R.) a white female, married, aged 61, was admitted July 29, 1941, and discharged Sept. 9, 1941. She was readmitted Sept. 30, 1941, and discharged Oct. 5, 1941. Diagnosis: Involutional psychosis, type: agitated depression. (Given eighth electro-shock treatment as out-patient Oct. 9, 1941).

Onset of Illness: For past three years has suffered from undulant fever. Two months ago began feeling that she was being eaten up by bugs. Six weeks ago jumped in well. She was rescued after about one hour but developed double pneumonia and was in a general hospital for 15 days. She continued restless and noisy in the hospital and was committed to the Milledgeville State Hospital. Her husband removed her from the State Hospital and returned her to his home where he had kept her 5 days, when she was admitted to my care.

Family History: Father living and well, aged 82. Mother living and well, aged 81. The patient is the oldest of two sisters and three brothers, all living and well.

Past History: Aside from the Brucella infection the only other illness was appendicitis with appendectomy and ventral suspension of the uterus in 1918. She married in 1901. Her husband has been an invalid for past ten years. Six children are all living and well.

Personality: (Described by husband and youngest daughter, aged 26.) Nervous and energetic, does the work of a man. Looks after home, husband and children, sews and cooks and does work in the garden and with flowers. No time for diversions but interested in community and neighbors, especially anyone ill.

Physical Examination: Resistive and uncooperative. Pulse 140, Temp. 98.6, Resp. 20, Wt. 136, blood pressure 140/80. Thick and heavily built with skin loose and wrinkled as if from loss of weight. Heart sounds normal.

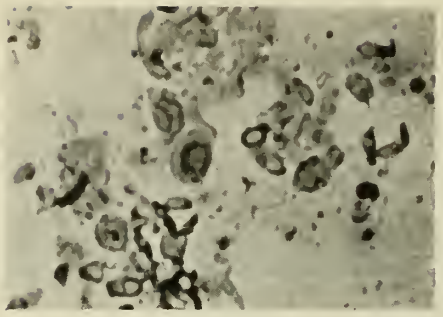


Figure 3
O. M., September 24, 1941, before Stilbestrol.

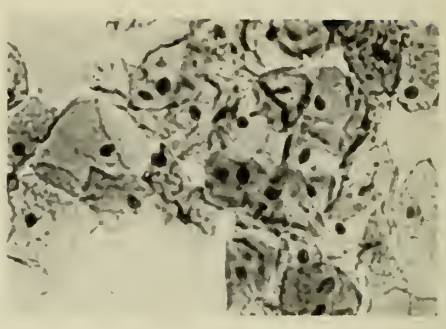


Figure 4
O. M., October 24, 1941, after Stilbestrol

Breath and voice sounds normal. No masses or tenderness in abdomen. Muscles tense and reflexes not obtained. No apparent incoordination.

Laboratory Findings: Urinalysis: amber, acid. 1022 sp. gr., + 1 albumin, no sugar, no acetone, many epithelial cells, pus cells and mucus threads microscopically. Blood count: R. B. C. 4,100,000 Hb. 12.3 grams per cent; W. B. C. 7,800 with 56 per cent polys. Sed. rate 0.6 mm. per min. Packed erythrocytes 41.5 mm. per cent. Blood bromide: 144 mg. per cent. Blood urea nitrogen 59 per cent. Blood Kahn reaction negative. Agglutination B. Brucella positive 1:200—weakly positive 1:400. E. K. G. rate 140, low potential—normal QRS interval,—34 deviation. Vaginal smears: see plates 1 and 2.

Mental Examination: Restless and apprehensive, actively negativistic and resistive; paces to-and-fro beside bed dressed in gown and barefooted, slapping back of hands, rubbing face and hair, lamenting in grunting-like noises and repeating over-and-over, "What have I done?" "Why can't I hold my hands still?" Does not interrupt lamentations to answer direct questions. Apparently not disoriented as she recognizes a former acquaintance and repeats her given name over many times.

Course in Hospital: Continued restless, resistive to bath and emunction; required spoon feeding from nurse and three nasal gavages. On fourteenth day had fever 102 F., which subsided with gavage of 1 quart dilute milk and sugar. The fever had followed her complete refusal of food and water.

All sedations were stopped after the first two nights in hospital and day and night nurses were kept busy forcing liquids, nourishment, and attempts to get her to take thiamine-hydrochloride and nicotinic acid. Her restlessness and lamentations continued unabated. On the twenty-eighth day she was given electro-shock with a full convulsive reaction. These treatments were repeated on the thirty-first, thirty-fourth, and thirty-seventh hospital days. She was visited by her husband on the thirty-seventh day and as she was so much more composed and talking quite rationally she was allowed to go home to return for treatments at weekly intervals. Her husband felt that she was doing so well that she did not return for three weeks. At this time she was quite composed and rational except that she stated that she felt as if there were bugs or worms in her vagina. She agreed to stay another week in hospital for three more treatments and to return for further treatment if needed. Vaginal smears were made at this time and after three electro-shocks she was allowed to return home again. She returned for the eighth shock on schedule. Stilbestrol in 0.1 mg. daily doses was started during her second admission. Her feelings of bugs in her vagina disappeared along with the change in her vaginal smears. Recent reports in addition to follow-up visits show her resuming her energetic activities and "doing just fine," as her husband expresses it.

Case 2. (1272R.) White female, single, aged 57, was admitted Sept. 22, 1941, and discharged Oct. 26, 1941. Diagnosis: Involutional psychosis, type: agitated depression.

Onset of Illness: Since menopause at age of 52 she has been increasingly nervous and given to periods of despondency which were usually relieved by a trip away from home. Four months ago she went to a seashore resort but after two days was so nervous, restless, and dissatisfied that a brother had to go for her. She was seen by the family physician at this time who gave her injections of estrogenic hormones and sedatives. She went to see a psychiatrist and told him she wished to get out of it all, intimating suicide.

An identical twin sister is similarly but less severely despondent, and despondency seems to alternate between the two. Both had confessed suicidal tendencies and each in turn tried to appear cheerful to boost the other's spirits. The patient began expressing a fear of the bath room as she could lock herself in there and harm herself. Her sister, knowing this, hid a bottle of Lysol but the patient found it and was prevented from drinking it after a struggle to take the bottle away from her. She was admitted to the hospital on the same day.

Past History: The healthiest member of a family of eight. Never sick a day in her life.

Family History: Father died at 72 of pneumonia; mother died at 42 of pneumonia. Three brothers and three sisters all in good health except the twin sister who has been nervous with periods of despondency since menopause. One half-sister is in good health.

Personality: The twin sisters lived with two bachelor brothers. The patient looked after the home and the other sister did secretarial work in the brothers' business. They dressed alike and did everything together, enjoyed many friends and were considered sociable.

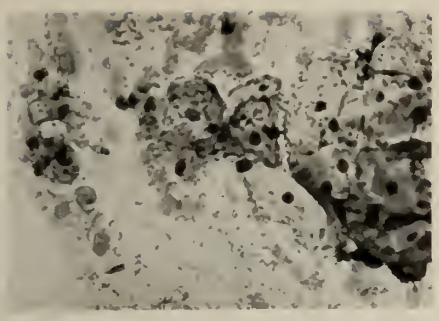


Figure 5
R. S., September 2, 1941, before Stilbestrol.

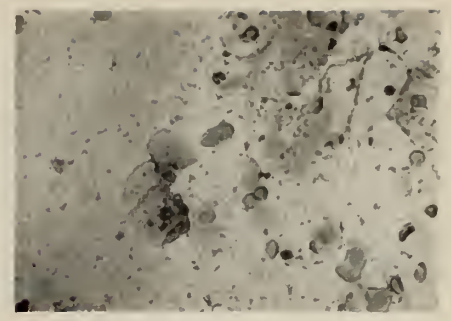


Figure 6
R. S., January 9, 1942, after Stilbestrol. 1 mg. daily-1263-1.

The patient looked after the home and flower garden and had charge of the cradle roll in the Sunday school. After the menopause they were both increasingly seclusive, staying at home and avoiding friends.

Physical Examination: Cooperative, obese. Wt. 148 lbs., Ht. 5 ft. 6 in. Temp. 98.6 F. Resp. 14, pulse 72, blood pressure 117/70. No significant findings indicative of organic disease.

Laboratory Findings: Urinalysis essentially negative. Blood, R. B. C. 4,930,000. W. B. C. 7,400. Polys. 63 per cent. Hb. 14.6 grams. Kahn negative; blood sugar 114 mg. E. K. G. normal.—17 deviation of axis. See plates 2 and 3 for vaginal smears.

Mental Examination: Perplexed and apprehensive with periods of crying and restlessness. Intense feeling of hopelessness and failure in life, and that she would be better off dead. Explains apprehensiveness as fear of harming herself. Accepts constant nursing supervision as being guarded. Clearly oriented but complains of inability to concentrate.

Course in Hospital: Due to tension of suicide nursing regimen and obvious robust physical condition, electroshock was started on third day and repeated on succeeding fourth day intervals for seven treatments. After the first treatment she was composed, sociable with other patients, occupying herself with handiwork, readings, walks about grounds, visits to the picture shows and to the beauty parlor. Stilbestrol started after third electro-shock.

Case 3. (1263 L.) White female, married, aged 52, was admitted Aug. 21, 1941, and discharged March 1, 1942.

Diagnosis: Involutional psychosis, type: Agitated depression, paranoid coloring.

Onset of Illness: For past six months has seemed unduly nervous. Two months ago husband noted that some of her remarks seemed strange. One month ago began worrying about her physical condition. Felt that "her food did not pass through her." Would not eat unless urged. Spoke of her body as "just being dead." Kept hands on abdomen as if feeling her organs. Very recently began thinking she was to be arrested by police for some wrong she had done, that the whole family is in ruin and disgrace and that they also will be put in jail. Usually sleeps after taking one nembutal at night. Has been given theelin in oil in weekly doses and peptonoids as a tonic.

Family History: Father died at 87. Mother died at 85. Two brothers and one sister living and well.

Past History: Typhoid fever at age of 20 only past illness. Menopause two years ago. Menses normal before this and no difficulities associated with menopause. Married at age of 22. Two children, aged 27 and 25.

Personality: Very sociable with many friends. Enjoyed supervising home, kitchen and flower garden. Can do any kind of handiwork. A regular church attendant, enjoyed picture shows and of general diffuse interests.

Physical Examination: Temp. 98.8 F. Resp. 16. pulse 120, blood pressure 220/120. Pulse visible in arms and abdomen. Ht. 5 ft. 8 in., Wt. 118. General appearance restless, nervous, and apparent recent loss of weight. Skin dry and sallow. Excessive wax in external ear canals. Heart beat visible and palpable over entire left chest, enlarged to percussion, no apical thrill felt. Sounds accentuated and reversed in rhythm. Systolic murmur which does not replace first sound, soft and blowing in quality. No masses or tenderness in abdomen. No edema of extremities. Physical diagnosis: Hypertension, hypertrophy of heart, mitral insufficiency.

Laboratory Findings: Urinalysis: cloudy, acid, 1020 sp. gr. trace albumin, no sugar, no acetone, amorphous material and 15-20 pus cells to field microscopically; blood: R. B. C. 4,210,000. Hb. 12.7, W. B. C. 6,800, polys. 68 per cent. Sed. rate 0.06 mm. per min. Pack erythrocytes 43 mm. Blood sugar 100 mg. Bromide negative. Kahn negative. X-ray of chest: dropped heart type, lung fields clear except for three rather large calcified areas in right middle lobe. E. K. G. normal except rate 100. Vaginal smears: see plates 5, 6, 7 and 8.

Mental Examination: Restless, depressed and appears tired. Difficulty in concentrating. Rubs hands and hair. Restlessness increased at night. Thinks officers are outside of hospital, waiting to arrest her. Tries to leave building to "give herself up." Knows something terrible has happened to her husband and children and it is all her fault. Orientation good. Refuses food and requires spoon feeding and occasional tube feeding. Generally unoccupied except for walks for exercise under constant nursing supervision: no suicidal tendencies noted at any time.

Course in Hospital: Patient was resistive to tube

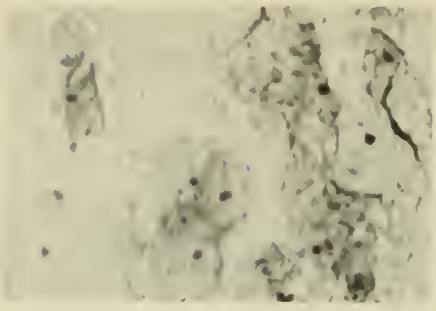


Figure 7
R. S., 1263-1, January 12, 1942, after Stilberstrol, 5 mg.

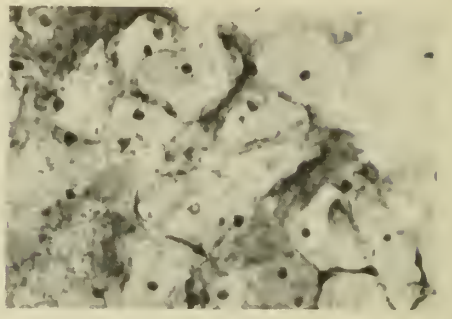


Figure 8
R. S., January 23, 1942, after Theelin, 2000 units daily, 1263-1.

feeding and was given insulin in sub-shock doses to increase appetite and to avoid tube feeding. She gained some weight and her heart action calmed to a rate of 90 per minute and her blood pressure decreased to 160/90. She continued with ideas of wrong, expecting arrest, and rubbed large bald spots in her hair and picked sore places in her scalp and on face. She was given stilbestrol in doses of 0.2 mg. daily disguised in food or tube feeding or 0.1 mg. when she would take it voluntarily. January 12 she received 5 mg. stilbestrol and this was followed by 1.5 mg. daily for 7 days. Theelin, 2,000 units daily substituted for stilbestrol from January 20 to January 29, at which time it was discontinued on account of vaginal bleeding. Electro-shock was started January 27 and continued to February 27—nine treatments in all, the last two treatments at weekly intervals. She recovered with gradually increasing lucid intervals following immediately after she recovered memory from shock. The last treatment, four days before she was to be discharged, was given at her request as she had dreamed that she was again depressed. The vaginal smears are shown in plates 5, 6, 7 and 8, following stilbestrol in more or less constant small dosage, excessive dosage, and then after theelin. The estrogens were omitted after vaginal bleeding and the patient discharged only three days after stilbestrol treatment was resumed, preventing continuation of the study.

Comment

Two cases reported in detail showed prompt response in the vaginal mucosa to stilbestrol in 0.1 mg. daily peroral dosage after the involutional psychosis was in remission from electro-shock therapy. Slides from more or less parallel cases bear out the idea that these are not isolated incidents. A third case two years postmenopause showed persistent immature desquamated vaginal mucous cells and castrate type cells in spite of continuous stilbestrol therapy in small doses over a four-month period, then excessive dosage over eight days and vaginal bleeding with the substitution of theelin parenterally. This bleeding can be interpreted either as withdrawal bleeding which theelin did not prevent, or as the effect of theelin plus one electro-shock treatment.

Conclusions

1. Involutional psychoses in women are associated with the castrate type of vaginal smears. This reaction may be common in postmenopausal women regardless of the state of mental health.
2. Following remission of involutional psychosis response to a small daily dose, 0.1 mg. stilbestrol shows this reaction is reversible to a premenopausal type of vaginal desquamation.
3. In continuing involutional psychosis the vaginal mucosa reaction seems resistant to treatment with at least two estrogens.
4. Three illustrative cases are reported.
5. Projection slides of microphotographs in color are shown.

Stilbestrol furnished by Department of Medical Research, Winthrop Chemical Co., 1004 Candler Bldg., Atlanta, Ga.

BIBLIOGRAPHY

1. Bureau of Census, Patients in Hospitals for Mental Disease 1936, U. S. Dept. of Commerce.
2. Werner, A. A.; Kohler, L. H.; Ault, C. C., and Hector, E. J.: Involutional Melancholia, Probable Etiology and Treatment, J. A. M. A., 103:13 (July 7) 1934.
3. Greenblatt, Robt. B.: The Vaginal Smear As a Guide to Estrogen Therapy, J. M. A. Georgia, 30:297 (July) 1941.
4. Osgood, C. W.: An Analysis of Disappointing Results with Metrazol in the Treatment of Certain Depressions, J. Nerv. & Ment. Dis., 95:192 (Feb.) 1942.
5. Danziger, Lewis: Estrogen Therapy of Agitated Depressions Associated with the Menopause, Arch. Neurol. & Phychiat. 47:305 (Feb.) 1942.
6. Meduna, C.: New Methods of Treatment of Schizophrenia, Gyogyaszat 76:225-229 (April 12) 1936. Abstract, Arch. Neurol. & Phychiat. 35:361-363 (Feb.) 1936.
7. Pratt, J. P.: Tilbestrol, A Clinical Study in Estrogenic Therapy, J. Clin. Endocrinology 1:50-52 (Jan.) 1941.
8. Soule, S. D., and Bortnick, A. R.: Stilbestrol, A Clinical Study in Estrogenic Therapy, J. Clin. Endocrinology 1:53-57 (Jan.) 1941.
9. Davis, M. Edward, and Boynton, Melbourne W.: Indications, Clinical Use and Toxicity of 4-4 Dihydoxy-diethyl stilbene, J. Clin. Endocrinology 1:339-345 (April) 1941.
10. Soule, Samuel D., and Bortnick, A. R.: Use of Stilbestrol in Suppression of Lactation, J. Clin. Endocrinology 1:409-410 (May) 1941.

11. Taylor, Samuel G. III, and Thompson, Willard O.: Treatment of the Menopause with Stilbestrol, J. Clin. Endocrinology 1:411-415 (May) 1941.
12. Ladner, J. E., and Inlsky, A. S.: Effect of Stilbestrol on the Myometrial and Endometrial Activity of the Human Castrate Uterus, J. Clin.
13. Morrell, J. A.: Stilbestrol, Summary of Some Clinical Reports, J. Clin. Endocrinology 1:419-423 (May) 1941.
14. Burlingame, C. C., and Patterson, Majorie B.: Estrogen Therapy in Psychoses, J. Nerv. & Ment. Dis. 94:265-276 (Sept.) 1941.
15. Ripley, Herbert S., and Shorr Ephraim, Papanicolaou, George N.: The Effects of Treatment of Depression in the Menopause with Estrogenis Hormone, A. J. Psychiat. 96:905-914 (Jan.) 1940.
16. Wilder, Earle M.: Clinical Experience with Stilbestrol, A Synthetic Estrogen, Bull. School Med. Univ. Maryland 25:99-104 (Oct.) 1940.
17. Schube, Purcell S.; McManamy, M. C.; Trapp, C. E., and Houser, S. F.: Involutional Melancholia, Arch. Neurol. and Psychiat. 38:505-512 (Sept.) 1937.
18. Dynes, Jno. B.: Estrogenic Therapy of Involutional Melancholia, Arch. Neurol. and Psychiat. 42:248-259 (Aug.) 1939.
19. Rothermuch, Norman O.; Postle, Beatrice, and Foltz, Louis M.: Altered Concepts of Therapy of Involutional Melancholia with Estrogen and Androgen, Arch. Neurol. and Psychiat. 45:752-768 (May) 1941.
20. Graner, Rolt C.; Beall, Chester F., and Wilson, G. Randolph: Endometrical Response to Diethyl Stilbestrol in Radium-induced Menopause, Am. J. Path. 17:87-92, 1940.
21. Shorr, Ephraim: The Menopause, Bull. Acad. Med. N. Y. C. 16:453-474 (April) 1940.
22. Meigs, Joe Vincent: The Menopause, Am. J. Surg. 58:223-227 (April) 1940.
23. Burch, Lucius E.: Medical Aspects of the Menopause, J. Missouri M. A. 33:208-212, ? ? ?
24. Kurzrok, Lawrence; Bunberg, Chas. S., and Weber, Henry: The Use of Stilbestrol in the Menopause and Other Conditions, Am. J. Surg. 52:311-314 (May) 1941.
25. Weed, Jno. C.; Weinstein, B. Bernard; Lork, Frank R.; Douglas, J. W., and Collins, Conrad G.: The Oral Administration of Stilbestrol, A. J. Obst. & Gynec. 39:1047-1049 (June) 1940.
26. Gray, Lamar A., and Gordinier, John D.: The Effect of Diethyl-Stilbestrol and Diethly-Stilbestrol Dipropionate on Menopausal Vaginitis and Symptoms, A. J. Obst. & Gynec. 41:326-328 (Feb.) 1941.
27. Karnaky, Karl John: Clinical Use of the New Synthetic Estrogenic Hormone, Stilbestrol, South. M. J. 32:813-315 (Aug.) 1939.
28. Atkinson, Dorothy W., A Review of Experimental and Clinical Trials of Stilbestrol, Endocrinology 27:161-165. (what month and year)?
29. Fuerstner, Paul S.: Experience with Stilbestrol, West. J. Surg. 48:742-745 (Dec.) 1940.
30. Greenblatt, Robert B.; Torpin, Richard, and Brown, W. R.: Diethyl-Stilbestrol, Sou. M. J. 33:1276-1285 (Dec.) 1940.
31. Davis, M. Edward: A Clinical Study of Stilbestrol, Am. J. Obst. & Gynec. 39:938-953 (June) 1940.
32. Muckle, Craig W.: The Suppression of Lactation by Stilbestrol, Am. J. Obst. & Gynec. 40:133-135 (Jan.) 1941.
33. Hoffman, Max H.: Diethyl-Stilbestrol, A Synthetic Estrogenic Hormone, Minnesota Med. 24:222-225 (April) 1941.
34. Palmer, Allan: Clinical Experiments with Diethyl-Stilbestrol, Am. J. Obst. & Gynec. (what Vol.?) 1018-1026 (June) 1941.
35. Hepp, Joseph A.: Stilbestrol: A Clinical and Investigational Study, Pennsylvania M. J. 44:717-721 (March) 1941.
36. Abarbanel, A. R., and Klein, Milton D.: Clinical Experiences with Stilbestrol, New York State J. Med. 41: 383-389 (Feb. 15) 1941.
37. McCullagh, E. Perry, and Jones, T. Reid.: Stilbestrol in the Treatment of Ovarian Deficiency, Cleveland Clin. Quart. 8:32-41 (June) 1941.
38. Wilson, David C.: The Results of Shock Therapy in the Treatment of Affective Disorders, J. Psych. 96:673-679 (Nov.) 1939.
39. Solovay, Julius, and Schwarz, Frank W.: Parmacological Shock Treatment of Involutional Melancholia, J. Nerv. & Ment. Dis. 93:443-450 (April) 1941.
40. Zeifert, Mark: Metrazol Therapy in Manic-Depressive and Involutional Psychosis, Psychiatric Quart. 13:498-502 (July) 1939.
41. Halvorsen, C., and Harris, J.: Metrazol Therapy of Involutional Depression, Washington M. Ann. 2:11-18 (Jan.) 1939.
42. Grotjahn, Martin: Psychiatric Observations in a Case of Involutional Melancholia Treated with Metrazol, Bull. Menninger Clin. 3:122-125 (July) 1939.
43. Smith, Lauren H.; Hughes, Joseph, and Hastings, Donald W.: First Impressions of Electro-shock Treatment, Pennsylvania M. J. 44:452-455 (Jan.) 1941.
44. Hackfield, A. W., and Halvorsen, C.: Modified Convulsive Therapy for Involutional-Depressive Psychosis, Northwest Med. 38:373-375 (what month & year)?
45. Robinson, G. Wilse: Convulsive Shock Therapy in the Involutional Psychoses, J. Kansas M. Soc. 40:14-15 (Jan.) 1939.
46. Robinson, G. Wilse: Treatment of Depression and Melancholia, J. Missouri M. A. 37:65-73 (Feb.) 1940.
47. Chapman, Ether A.: Involutional Melancholia, Elgin Papers 3:171-178 (Jan.) 1939.
48. Hays, Robert R.: Treatment of Involutional Mclancholia, Ohio State M. J. 35:710-712 (July) 1939.
49. Cerletti, H.: Electric Shock Therapy, Wiener Medzinsche Wochenschrift 90:995-1028 (Dec. 28) 1940.
50. Bennett, A. E.: Convulsive Shock Therapy in Chronic Depressive Psychoses, Bull. Menninger Clin. 2:97, 1938; Am. J. M. Sc. 1936; 420 (Sept.) 1938.
51. Bennett, A. E.: Metrazol Convulsive Shock Therapy in Affective Psychoses, Am. J. M. Sc. 198: 695-701 (Nov.) 1939.

THE NEUROTIC PERSONALITY

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The term, neurotic, must be considered relative. Many so-called "normal" reactions have neurotic components and the reactions of the neurotic are often "normal." After all, in the last analysis, the difference between health and illness lies in this, that the healthy individual is thinking in terms of what he is doing to life, and the ill in terms of what life is doing to him. The difference between the "normal" and neurotic reaction is not a difference in kind or quality but a quantitative difference, one of degree; and the reaction is in terms of "something wrong". Thus there are two components: degree or quantity of reaction, and attitude thereto. Two men made a rapid descent of twelve floors in an elevator. When they reach the bottom the pulse rate of both is accelerated. One goes on about his business; the other stops, feels his pulse and rushes off to the doctor. A man during an air-raid "goes all to pieces". He shakes; his heart palpitates; he may vomit or even have acute diarrhea. The "all clear" sounds; he shakes himself together and goes on with his work. This reaction is considered a part of air-raid experience. Let this man have the same reaction while sitting at his desk working and he thinks in terms of "what's wrong" and runs to the doctor.

Before consideration of the reasons for these differences, let us discuss somewhat

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the average, daily reactivities of the average person. All are born in insecurity and live through life with varying degrees. Urged by this, man tries to accomplish and satisfy. In these efforts he will meet with many frustrations due to social conditions, his own inherent limitations in qualities and qualifications and vicissitudes of fortune. Now every frustration brings a reflex reaction of anger, anything from irritation to rage and, as a result, feelings of hostility. Most of the time these hostility feelings are worked off in harder work or in the activities of tennis or golf.

Often, however, these hostility feelings are directed at someone or something. Often the reaction of anger gets out of bounds and resulting action becomes ill-advised. Then comes the reaction of guilt which always calls for some form of atonement. Man has worked out ways and means of satisfactory atonement which lie more or less in the realm of action. The most constructive is "living it down". Then there is apology, correcting mistakes and indirectly by doing something "sacrificial" for someone else. Thus the average man in his daily routine in the great experiment of life, strives for elusive security; meets frustrations; gains outlet for hostilities and atones by action for his guilt. He remains in a relative state of health.

Why the excess reactivity in some people? There is lacking an essential degree of security feelings resulting in undue feelings of insecurity. The reasons for this are too numerous for the scope of this paper. In general, however, there is the constitutional element of hypersensitiveness with native hyperreactivity. Then in the growing up period the deficit or lack of factors promoting feelings of security. The most important of these is a "feeling of belonging". Insecurity is enhanced by broken homes, homes of strife, rejection by parents and all these elements which make the child feel not-wanted. Therefore, it is undue feelings of insecurity which bring about the overreactivity.

In proportion to one's insecurity so is the strength of the drive for security. Consequently, some must always know the answer; must always be right and always succeed; and must possess completely. These goals symbolize security. Out of these strivings grow what might be called a "perfectionistic" attitude. They expect perfection in everything and too much of themselves and everyone else. Since these goals are impossible and apply to even the most trivial aspects of life, such persons are constantly faced with failure (ambition out of proportion to accomplishment). Each failure brings greater feelings of insecurity and there is created a vicious circle. This mounting insecurity gives rise to greater and greater self-consciousness with its tendency to think in terms of "what is happening to me". There is a consequent tendency for the perfectionism to assume the attitude of "what's wrong with me". Thus most of the reactivities released by the average person in outward action, in these persons is turned inward.

The perfectionistic drive toward impossible goals brings hourly and daily frustrations. Thus this person accumulates a tremendous load of hostility feelings, and, since he expects so much of himself, he is most frustrating to himself. This is often the source of suicidal gestures. The rising tide of tension resulting from these accumulating hostilities over and over are released in ill-advised action. In such a person the least digression from perfection either in thought or action brings tremendous feelings of guilt. And in all of this the release tends to be self-directed so that self-punishment is a common type of reaction. Often the direction of the reaction is doubly motivated; accomplishes an expression of hostility with self-punishment. This may be summed up in the phrase used by the little boy, "Nobody loves me. I'm going in the garden and eat worms." He thus punished those who do not love him and at the same time himself for the guilt resulting from feeling this way toward them.

Thus the symptomatology of the neurotic is not of fundamental importance but points back to the elements making up this type of personality and in this lie the points for consideration and therapy. Insecurity makes for anxiety and panic. Would that

the term "nervous" could be discarded. It is obscure, vague and cloaked in mystery. Emotional upset is something everyone has. Everyone can understand anxiety and fear. Everyone experiences anxiety and fear. Not everyone is "nervous". To get into the category of common experiences is important to the ill person. Disappointment brings depression. Self-consciousness makes for hypochondria. Frustrations result in temper-tantrums or "fits", sickness is the most socially acceptable evasion in our culture. So "sickness" is used as escape, to express hostility and to punish one's-self. Feelings of inadequacy result in indecision and fear, and in the mounting tensions of anxiety, fear and panic and of irritation, anger and rage. These are the somatic components affecting the function of heart, gastro-intestinal tract, endocrines, etc. Thus, there results the multitudinous symptoms in themselves so baffling to understanding and so elusive to the ordinary diagnostic procedures.

Approach should be based on the three overreactive components: insecurity, hostilities, and guilt. Every sick patient who goes to the doctor has an idea that his experiences are unique with him. The main issue at this point is to give him a different attitude toward what he thinks of an illness and desensitize him to his feelings. This will result when he realizes that his is an experience common to everyone, only he has taken it seriously. This can be done only when ordinary terms of every day experiences are used, discarding "nervousness" and "just nerves" in all their vague connotations. The recounting of the ordinary round of human experience in these three areas and an understanding that anger and fear feelings are reflex and outside the control will do much to lessen the accumulating guilt with its consequent self-punishment and explanation of its use can be quite informative. He doesn't feel equal to doing something. It isn't done. He feels guilty about not doing it, so he sits down and worries. So long as he worries about it he doesn't have to do it because he is constantly resolving the guilt resulting from not doing it by punishing himself with worry.

Further constructive directions may be based on the three components. Since security comes from feelings of belonging, belonging to organizations, group activities may be suggested. Such hobbies as involve hammering, sawing, chopping, etc., and games such as golf, tennis and badminton get rid of hostility feelings. For one's guilt feelings there should be atonement in giving service without recompense, of feeling one is needed, worth-while. People have been surprisingly helped recently by Red Cross activities, particularly rolling bandages and making dressings. They belong to a group which results in feelings of belonging and enhances security. They are aggressively active with outlet for hostilities. They are doing something worth while without recompense and thus atoning for feelings of guilt.

So, be sure you are dealing with a neurotic reaction pattern by a thorough examination. Realize that the patient is as truly ill as any patient. But, think in terms of symptoms only as indicators of the underlying personality. Avoid use of vague terms such as "nervousness" and "just nerves" but speak in terms of every day experiences. In this process lead him to understand that he is not unique but with experiences shared by all, and then give him substitutive outlets for those in-turned which have so tended to destroy his usefulness as a member of society.

ALWAYS USE MILD TINCTURE OF IODINE

The strong (7 per cent) tincture of iodine never should be applied to a wound, according to an announcement by E. Fullerton Cook, Phar.D., Philadelphia, chairman of the Committee of Revision of the Pharmacopeia of the United States of America. *The Journal of the American Medical Association* reports in its July 18 issue. The strong tincture evaporates quickly, leaving crystals of free iodine in the wound, which injure the tissues and prevent healing.

According to Dr. Cook, *The Journal* says, "pharmacists should always sell the U. S. P. Mild Tincture of Iodine for first aid, and not the strong tincture of iodine; neither should they prepare the mild tincture by diluting the strong tincture, for then it will contain potassium iodide instead of sodium iodide, and the alcohol percentage will not be correct. Sodium salts are much better for application to a wound than are potassium salts."

THE NERVOUS PATIENT, THE FAMILY PHYSICIAN AND THE CONSULTANT

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This is a plea for a united front in the management of the nervous patient. No therapeutic miracles are offered. In the past ten years an increasing amount of time in the annual meetings of the Medical Association of Georgia has been devoted to nervous diseases but, like thyroid disease, their importance is apparently not fully established.

In the case of any nervous patient, the ideal arrangement is for the family physician to refer the patient to a consultant whom he selects and leave the patient to be studied until a satisfactory diagnosis is made. It is not always possible to tell the family how much time will be required for a satisfactory examination the first day a patient is seen, as a thorough study of all angles of the case must be made. This will give the family physician confidence in the therapeutic program if he understands the importance of detailed management of these cases.

Unfortunately, patients often wander off on their own accord and consult another physician whose work is not well known to the family physician. This is usually due to the influence of friends of the patient, or to the family physician waiting too long before he suggests the need of a consultation. In this type of consultation it is only natural that the family physician be luke-warm in carrying out detailed plans of treatment. Nevertheless, the plan of treatment must be executed by the family physician, and all will be lost if he takes lightly certain details which may have more psychic than specific effect. An anxious nervous patient will soon detect any lack of confidence on the part of his home physician.

Occasionally a consultant ignores the family physician and treats the patient indefinitely. This may be deliberate or accidental. I have known patients to insist they never had a family physician, although later information showed they had had good medical care. Then occasionally we encounter a case where the apprehensive patient was led to believe that all previous treatment was wrong even though it was well planned. Only confusion can result from such situations and a doubting patient will have even less confidence in the medical profession.

The family physician is often fully aware of the patient's nervous condition and probably knows the cause of it. In such instances the only purpose of a consultation is to rule out organic disease complicating the nervous disorder. There may be an honest and conscientious difference of opinion between the family physician and the consultant. When this exists an agreement must be reached before treatment is begun. Later developments sometimes show the consultant to have been in error, or actual change in the condition of the patient may occur which completely changes the therapeutic problem. When this occurs only the common sense and judgment of the family physician who is on the ground can save the day.

The details of a plan of treatment for a nervous patient often seem silly to anyone but an internist or psychiatrist. It is only by a careful outline of work, play, and rest along perhaps with minor drug therapy and diet, that a nervous patient can be rehabilitated. If the program is taken lightly by anyone in connection with the case, all will be lost. The patient must feel that everyone is pulling in one direction. Any doubt in the patient's mind will start the ball rolling down hill and he will cease to make further effort.

The time is past when any physician should feel that nothing can be done for the nervous patient. A great amount of time and patience is required, and progress is often slow, but persistence often brings amazing results. A very competent intern whose training had been on the wards of a large charity hospital once said to me, "Just what do you talk to these nervous patients about? How can talk be treatment?" That question can hardly be an-

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swered because it reflects lack of rounded training. My purpose in mentioning the incident is that there are forces in operation at present that would lower our standards of medical education, when what we need is even higher standards.

Conclusion

A few circumstances are mentioned which may lead to the unsuccessful management of the nervous patient.

It is not enough just to remember that nervous patients exist, but we must think in terms of somatic disorders from nervous influence.

Cooperation between all physicians coming in contact with the nervous patient is essential.

THE ROLE OF NUTRITION IN MENTAL HEALTH AND IN MENTAL DISEASE

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Smyrna

Proper nutrition is only one of the many factors which can influence one's ability to think, feel and act correctly in a constantly changing environment. Obviously it is a vital necessity for health in general, but is often taken for granted or completely neglected. During the past few years extensive laboratory and clinical evidence has broadened our views on the degrees and manifestations of malnutrition to such an extent that it is now known to be much more prevalent than was hitherto supposed. In addition to the well known disease entities caused by advanced and usually chronic nutritional failure, such as beriberi, polyneuritis and pellagra, we now recognize symptoms, signs and in some instances clear-cut syndromes due to an early or an acute deficiency of one of the essential food elements. In the light of this newer knowledge progress has been made in the diagnosis and treatment of certain types of mental disorders.

In the large majority of psychiatric patients there are multiple etiologic factors which are revealed only by careful study of the individual as a whole and by giving due consideration to heredity, constitutional endowment, environment, psychogenic factors as well as organic conditions involving the brain. Malnutrition is an important and frequently encountered problem, as it is well known that most patients with mental disorders fail to receive an adequate diet at one time or another. In many instances there is a secondary nutritional failure, especially in patients with marked depression or excitement. In some of the organic reactions such as cerebral arteriosclerosis and senility this is frequently observed. For many years we have seen these patients enter the hospital for custodial care and, in addition to the common neurologic signs and evidences of deterioration, a severe nutritional deficiency will be manifest. Such patients usually show delirious reactions of varying degrees. Several reports[1,2] have confirmed our observations on such patients that the administration of nicotinic acid results in prompt improvement provided an otherwise adequate diet is given. Although the basic organic conditions are unchanged these patients often improve sufficiently to allow a satisfactory adjustment at home. In fact, a state of malnutrition may be superimposed on any of the primary reaction types.

Among patients seen in a private psychiatric hospital, those most likely to show a state of malnutrition related to a mental disturbance include the toxic-infectious, alcoholic, drug and postoperative psychoses and some of the psychoneuroses. A careful history relative to dietary habits often reveals definite nutritional inadequacy. Recognition and proper evaluation of this fact are essential and if such deficiency is not the chief etiologic factor, it will frequently be an important predisposing or exciting cause. Regardless of the role, whether it be primary or secondary, faulty nutrition is important and, fortunately, is a condition easily controlled and modified according to the needs of the patient.

If there is a failure to ingest, absorb, or utilize the essential food factors, the

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normal function and structure of body tissues cannot be maintained. There is first tissue depletion, followed in turn by biochemical, functional and anatomic lesions. The degree of alteration depends on the duration and severity of the nutritional inadequacy, and in advanced states these changes are likely to become irreversible. In the milder conditions prompt recovery results as soon as the deficient factors are supplied and utilized. Rarely is malnutrition the result of a deficiency of a single factor. Instead there are usually multiple factors involved. The essential good elements — proteins, carbohydrates, fats, minerals and vitamins — are closely related in the process of metabolism, and to a large extent are dependent upon one another. Furthermore, there exists an intimate relation between metabolism and the endocrine system which must not be overlooked.

No attempt will be made to record here more than a general summary of the experimental work done and the clinical observations made on mental symptoms resulting in deficiencies of the various food factors. Many articles of value have recently appeared, especially those by Jolliffe,[2] McLester, Sherman,[3] Spies,[4] Youmans,[5] Wortis,[6] Sydenstricker, Cleckley, Geeslin,[1] Swank and Prados[7 8] and Williams, Mason, Wilder and Smith.[9]

In protein deficiency no specific lesions of the nervous system have been demonstrated. There may be observed clinically, however, mild mental depression, loss of efficiency, fatigability, muscle weakness and anemia in the early stages, and so-called nutritional edema in the severer states.

Carbohydrate metabolism, of course, is of prime importance to the health of all tissues. The body requires an adequate dietary supply and its metabolism is closely related to the endocrines and especially to certain vitamins of the B complex group. Since the advent of insulin in the treatment of certain mental disorders a great deal of attention has been given to carbohydrate metabolism in the brain. Hypoglycemia, as a rule, causes a general decrease in cortical activity and a slowing down and an inaccuracy of mental functions.

The role of vitamins in mental health and mental disease is important and of special interest. Although there has been no evidence of vitamin A deficiency causing demonstrable changes in the human nervous system, experimental work by Wolbach and Bessey[10] demonstrated degenerative changes in the peripheral nerves, brain and spinal cord of rats fed on a diet deficient in this vitamin. These lesions were accompanied by incoordination, ataxia and paralysis. In view of these findings further clinical observations for such a deficiency in humans seems wise.

Deficiency of the vitamins of the B complex, and more especially that of thiamine and nicotinic acid, is of particular importance in patients with mental disease. As stated earlier, we now have new criteria by which to judge the presence or absence of certain deficiency states. To the well known symptoms of beriberi and polyneuritis have been added others which seem to be due to a milder or less chronic thiamine deficiency, many symptoms of which are referable to the nervous system. These are depressed mental states, irritability, insomnia, vertigo, heaviness of feet and legs; paresthesias and peripheral neuritic pain, which is usually symmetrical. Frequently associated with the above symptoms are anorexia, fatigue, dyspnea, constipation, debility, nausea and vomiting.

One of the most enlightening observations of controlled thiamine deficiency was made by Williams, Mason, Wilder and Smith.[9] Eight subjects were kept on a diet which was adequate, except for the thiamine content, for a period ranging from 88 to 147 days. In each patient there appeared all of the above mentioned symptoms, general as well as neurologic. Symptoms of thiamine deficiency appeared first in the more active subjects. Part of the observations were made in the summer and part in the winter. Symptoms appeared within 10 to 14 days during the winter but not until 4 or 5 weeks had elapsed during the summer. Increased metabolism in the winter months was suggested as the cause for such differences, which seems a logical explanation. In several of the subjects who were mental pa-

tients in a state of remission, there was an awakening of psychotic trends. Paresthesias of the feet and legs with tenderness of the calf muscles were present uniformly but no pain typical of beriberi or polyneuritis was observed. All patients showed a severe degree of debility after the prolonged withdrawal of thiamine. The marked anorexia, nausea and vomiting made termination of the experiments necessary. The treatment was also an experiment to determine the minimal quantity of thiamine necessary for the recovery of those who had been subjected to the deficiency. The same diet was continued but there was added a daily injection of 1 mg. thiamine hydrochloride. Nausea and vomiting ceased, and food was taken readily. In all subjects symptoms had subsided within 18 days. To others thiamine was given in smaller doses and in each instance symptoms persisted until the daily amount was over 0.95 mg. Dosage above this resulted in recovery. Among other observations the authors concluded that the general symptom-complex produced by the restricted deficiency of thiamine is not unlike "the disorder which the discriminating psychiatrist designates as neurasthenia."

A great deal of experimental work is being done on animals in an effort to learn the exact nature of the pathologic changes of thiamine deficiency. In addition to the fairly constant changes seen in the peripheral nerves, Swank and Prados[7,8] found in thiamine deficient pigeons degenerative changes in the primary neurons of the proprioceptive nervous system and in the central terminations of the optic nerve, as well as in the internuncial neurons of the same systems. They also observed in the brains of some animals small hemorrhages which are accompanied by perivascular sclerosis and interstitial cell proliferation. In all instances the vascular lesions were preceded by degenerative changes in the neighboring neurons and were thought to be due to metabolic changes consequent to thiamine deficiency. Lesions have also been described in the posterior column of the spinal cord, in the anterior and posterior nerve roots with some changes in the cell bodies of the ganglia, in the anterior horn cells and in the medulla.

The clinical symptoms of nicotinic acid deficiency vary according to the degree and duration of the deficiency. Dementia was formerly the only recognized mental condition associated with typical pellagra. In the milder and less chronic states of nicotinic acid deficiency, however, we recognize such symptoms as lassitude, nervousness, depression, stupor, irritability, restlessness, insomnia, disorientation, clouding of consciousness, delusions and hallucinations. Dermatitis, diarrhea, fever and prostration may be seen in advanced deficiencies, but are absent in the milder ones. The general symptoms commonly present in these patients are glossitis and stomatitis of varying degrees, anorexia, weakness and indigestion.

Clinically it should be remembered that the signs and symptoms of the individual vitamin deficiencies do not usually present themselves as clearly as we have described them. It should be realized that great variations of symptoms are possible and we must expect all degrees and combinations of symptoms when nutritional failure exists. A carefcl study of each problem should be made with proper evaluation of the nutritional status along with other factors likely to be involved. When there is evidence of a deficiency, the proper vitamins or other food elements should be supplied. We thus see that a balanced and adequate diet is of primary importance in the treatment of all mental patients. The nutritional failure should be fully appreciated, not only by the physician but also by the patient and his or her family. It is not logical to treat these patients without attempting to remove all possible predisposing, exciting and secondary factors.

BIBLIOGRAPHY

1. Cleckley, H. M.; Sydenstricker, V. P., and Geeslin, L. E.: J. A. M. A., 112:2107-2110, 1939.
2. Jolliffe, Norman: J. A. M. A., 117:1496-1502, 1941.
3. Jolliffe, Norman; McLester, J. S., and Sherman, H. C.: J. A. M. A., 118:944-950, 1942.
4. Spies, T. D.; Vilter, R. W., and Ashe, W. F.: J. A. M. A., 113:931-937, 1939.
5. Youmans, John B.: Nutritional Deficiencies, J. B. Lippincott Company, Philadelphia, 1941.
6. Jolliffe, Norman, and Wortis, Herman: Am. J. Psychiat., 98:340-346, 1941.
7. Prados, M., and Swank, R. L.: Arch. Neurol. & Psychiat., 47:626-644, 1942.
8. Prados, M., and Swank, R. L., ibid., 47:97-131, 1942.
9. Williams, R. D.; Mason, H. L.; Wilder, R. M., and Smith, B. F.: Arch. Int. Med., 66:785-799, 1940.
10. Wolbach, S. B., and Bessey, O. A.: Arch. Path., 32:689-722, 1941.

MILITARY NEUROPSYCHIATRIC DISEASES OF THE PRESENT WAR

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Mental illness is now recognized as a matter of major medical importance in modern warfare. Prior to the turn of the present century psychiatric problems were of little significance and were rarely recognized in the military services. In the Russo-Japanese War psychiatry made its military debut. In World War I military psychiatry appeared as a full-fledged partner of Mars in the guise of that most unfortunate term "shell shock." Today military psychiatry is again with us as a well developed but fortunately well recognized part of the complex medical problem of warfare. The magnitude of this problem in the present war cannot yet be measured. From the Selective Service data it is clear that a relatively large number of individuals have been screened from the military service, and having been screened are, from the point of view of the Army, of no military significance. Those individuals that are recognized and prevented from entering the military service represent what might be called the normal mental abnormality of the total male population of military age. Those individuals that are not screened out prior to entry into the military service, but enter into it in any of various capacities, are, because of their numbers and the seriousness of this type of disorder, a significant military problem. It is this group of individuals who have entered the military service and subsequently become a problem in that service which we shall consider at this time.

Normally, in time of peace, approximately one-third of all separations from the military service by reason of disability are for nervous and mental disorders. The leading cause of separation from the service under non-warfare conditions in the United States Army is schizophrenia or dementia praecox. Approximately one of every five soldiers discharged for physical disability in 1938, for example, was separated from the service because of this disorder. We have recently presented a survey of the first 200 patients admitted to the Neuropsychiatric Service of the Lawson General Hospital of Atlanta, Georgia. These represent approximately 12 per cent of the patients admitted to that hospital. Approximately 22 per cent of our frankly neuropsychiatric admissions are psychoneuroses or minor functional reactions. Approximately 18 per cent of our neuropsychiatric admissions are psychotic or insane. Fourteen per cent of our patients are in that group known as psychopaths in whom no frankly psychotic material is present but, as one of your group has so well phrased it, there is only a mask of sanity present. Eighteen per cent of our cases have been organic in nature, representing in many cases the neuropsychiatric end-results of severe head injuries. These are an interesting group in that they reflect the medical problems introduced by mechanized warfare. None of our patients is a battle casualty.

For the purpose of this presentation we have studied particularly the so-called functional nervous disorders, including the neuroses, psychoses, and psychopathies. This group constitutes approximately one-half of our total case load. We have made personality studies on our first 100 of these patients with functional nervous disorders. Of these 100 patients, 43 were minor reactions or neurotics, 37 were psychotic or insane patients, and 30 were psychopaths without psychoses but with severe behavior disorders. A statistical study of the incidence of these disorders is of interest but we have preferred for this presentation to consider the underlying personalities and backgrounds of these individuals who developed these disorders while in the military service.

Neuroses. Forty-three patients presenting various types of neurotic reactions have been studied in detail. In each case a longitudinal personality study was attempted and, where possible, additional social service studies have been obtained. This last has

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been available in approximately one-half of the patients studied. The predominant type of psychoneurotic reaction which we have observed is characterized particularly by anxiety and depression. Of 20 such patients studied 11 had severe suicidal drive and three made overt suicidal attempts. While these patients are classified as minor functional reactions, the physician treating them is constantly reminded of the severity of these symptoms and the seriousness of the underlying psychopathology of the group.

Personality studies of this group of patients have shown personality structures characterized by meticulousness, perfectionism, undue concern over trivia, sensitiveness and subjective feelings of inadequacy. The work record frequently suggests a rut type of life. One of these patients, for example, had what appeared superficially to be an excellent work record with approximately fourteen years in one occupation at the same desk, at the same place of business, at the same type of work and at exactly the same income. Personality study of this individual revealed severe subjective inadequacy for any additional stress or responsibility. When he was placed into an active war machine his reaction was one of severe anxiety-depression with strong suicidal drive.

A smaller group within this series of patients is the hysterical type of psychoneurotic. Three such patients have been studied in detail and were found to present severe psychopathology since adolescence. These individuals had been emotionally unstable, tremulous, constantly concerned about their bodily functions, fearful of responsibilities, sexually immature and presented in brief, upon simple inspection, what might well be termed a "scared rabbit" appearance. A third group of cases included in this general category is the hypochondriacal group who support the patent medicine manufacturer and who are psychiatrically inadequate, immature, hypersuggestible personalities who have, throughout their entire life history, been so preoccupied with their imagined bodily ailments that their work records are essentially if not actually nil. The somatic conversions manifested by this group in the military service have been gross hysterias with monoplegias, paraplegias, stocking anesthesias and similar phenomena. These have been easily relieved but promptly recur under minimal stress.

Psychoses. As we have previously indicated, the military psychosis of major incidence is schizophrenia or, as it was formerly termed, dementia praecox. This disorder is characterized by withdrawal from reality, negativism, often mutism, autistic thinking, severe mental confusion, preoccupation, paranoid delusional content, accusatory auditory hallucinatory experiences, affective impoverishment and loss of insight. The underlying personality of the 33 individuals whom we studied has been characterized by lack of self confidence, irresponsibility, sensitiveness in many cases, fear of crowds, deficient sex drive, and immaturity of judgment. The work records manifested by these personalities have been of two types:

1. The transient or vagrant who has worked periodically at many occupations, usually at an unskilled laboring level and rarely for more than a month or two at a time.
2. The group particularly of younger boys who, following school, worked at one or two jobs and then quit, returning home to the shelter of the family where they have sat about the house doing nothing. These patients are characterized by the family as "good boys" because they are so immature they remained at home helping mother wash the dishes or performing other menial tasks at an age and stage of their development in which they should have been gaining economic security and social independence.

Psychopathic Personality Disorders. This group of cases is characterized most predominantly by lack of a sense of responsibility. These patients are sane in the usual legal meaning of the term but perform utterly absurd acts. In the military service the term, psychopathic state, is used to include, perhaps unwisely, but by administrative necessity, those unfortunate individuals who, because of various types of personality disorders, are inapt or unsuited for the military service. In this group we include those schizoid individuals who are shy, sensitive, inadequate and immature. Prior to the military service they are often adjusted fairly well to a limited, protected

environment. Some of these individuals have a fair work record, usually under the protection of an older, more mature member of the family. In the military service these personalities are immediately overwhelmed by the rather rough and ready environment.

In our analysis of 30 cases of so-called constitutional psychopathy, we have classified the majority as inadequate personalities. By this term we have meant to include that group of individuals who are constitutionally inherently incapable of adapting to a life of adult responsibilities, and who, when confronted by the military service with its various vicissitudes, its rather strenuous routine, stern discipline and utter impersonality, react with what is patently poor judgment. Many of these individuals actually run away, some of them become mildly temporarily confused; some of them compensate by overindulgence in alcohol; others, with the best and most patriotic of intentions, persistently fail to make their proper formations, fail to maintain their equipment properly, or fail to keep up on long tiring marches. Many of them present somatic complaints, particularly backache, vague headaches and other symptoms which are objectively difficult to evaluate. Only by longitudinal study of the total personality concerned is the mechanism of this psychosomatic complaint indicated. In the protected environment of the hospital, these complaints usually subside promptly but with the first suggestion of return to the stresses and strains of active duty in the military service they recur—frequently with increased subjective severity.

The background of these individuals is so characteristic that any single case history is very like any other in this group. The individual usually adapts poorly to school and there are frequent truancy records. Vagrancy or vagabondage is common in this group. Many of these individuals have had several hundred jobs. One such individual had three jobs in one day. Often they are fired from these jobs for inefficiency but more often the individual simply walks across the street to another job because the grass on the other side of the fence looks greener. The judgment manifested by these individuals as reflected in their work records is obviously markedly impaired. There is universally a total absence of a goal ideal. These men have no aim nor do they appear to care where they are going. There is a most marked impoverishment of effect or a total lack of feeling manifested by this group. The uniform characteristic of this group is a total inability to profit by experience. These characteristics and conduct disorders are present not only during the individual's tour in the military service but in his total life experience. Such individuals are not improved by discipline and the Army does not make men out of such personalities.

The underlying personality of the individual who becomes mentally ill in the military service is an index not only to the type of illness which is manifested but also to the particular individual personalities who, in simple terms, cannot stand the stresses of that service. We have observed that approximately one-half of our patients have functional nervous disorders, suffering from either neuroses, major psychoses, or falling into that group known as the psychopathic states, primarily, inadequate personalities. It is axiomatic in psychiatry that mental illness, like infectious disease, does not arise de novo. It is, therefore, our belief that those individuals who become mentally ill with the so-called functional nervous disorders while in the military service had in their backgrounds the underlying traits or foundation for the functional nervous illnesses which they later manifested in the military service. Study of our data indicates that this is true. Thus, in our group of 33 cases of schizophrenia, ten had been previously mentally ill with obvious, recognized, diagnosed psychotic episodes prior to their entrance into the military service. Approximately one-third of these psychotic cases, therefore, although charged up as occurring in the military service, actually were present long before the individual entered the service. In each case which we have studied in which there has been a history of a previous psychotic break, the relapse manifested in the military ser-

vice has been similar to the original episode observed in civil life. There is, therefore, no difference *per se* in the type or characteristics of mental disorder manifested by men in uniform as contrasted to these same men in civilian dress. The 23 psychotic patients in our series who had not actually had an overt mental illness prior to that while in the military service had manifested what was clearly a sick personality, for a variable number of years prior to entrance into the service.

The neuroses which we have studied here, in 80 per cent of the patients have been manifested several years prior to the patient's entrance into the Army. In these cases there is no evidence that the military service either improved or harmed these patients. They were sick before, during, and shall probably be sick when under stress after their military interlude. The syndromes which these individuals presented in civil life are the identical symptom complexes which they present after induction into the Army. We use the same diagnostic terminology for classifying these cases as is used in civil life. Fortunately the term "shell shock" has been avoided during this war period. In our cases trauma has played no part. We question the advisability of the use of the term "traumatic neurosis" at this time and do not agree with Kardiner in his use of it. The most frequent neurotic illness we have encountered in the present military force is an anxiety depression. Trauma in the original Freudian sense is present in many neurotic illnesses and we, therefore, find the term of no descriptive assistance. Organic neurologic traumatic cases are not, we believe, properly classified, considered or treated as functional illnesses.

The psychopathies include, in the Army, the misfits of the military service. These individuals cannot be adapted or utilized in any part of the military machine. Unfortunately, we have no treatment for this group of patients. The military service has had in the cases we have studied, no bearing whatsoever upon the individual, his personality, or his conduct. Not infrequently one finds that these individuals who have been disciplinary problems in the military service have also a comprehensive civilian disciplinary record. Occasionally such individuals are encountered who have been convicted of major criminal offenses. In this connection the present urge of some newspapers and occasional officers of the law to utilize the man power of our penitentiaries and jails in the military service is psychiatrically unsound. Those individuals who are not amenable to the rather lax requirements of civil discipline and who have failed to adjust themselves to the elementary civil requirements of the rights of others, duty towards the state, and the like make equally poor adjustments to the sterner requirements of the military service. While it is true that some criminals are excellent individual fighters, it is also true that the present conflict is not one of individual combat but of huge coordinated masses of men and machinery. The basic training of the soldier is essentially concerned with the teaching of the individual that he is no longer such but a part of a total machine.

Study of the data here presented indicates that sick personalities in civil life are equally ill in the uniforms of the armed forces. This is no new observation and many suggestions have been presented with a view to recognizing and screening such personalities from active military service. Various workers have suggested complete social service data in each case prior to entrance into the military service. This is clearly an excellent method and probably the most accurate of all devised. It is, however, not practicable to accomplish such a study in each case. The sheer magnitude of such an undertaking in 20,000,000 cases is breath-taking and when one considers that each individual would require not less than one day of effort by a competent social service worker then it is clear that we would need a force of 10,000 trained social service workers, working only 66 years to provide us with the man power we need for this war effort! This calculation is based upon a seven-day week. It is doubtful that the enemy would delay that long.

Personality evaluation by orthodox means, therefore, is not compatible with

military necessity. The various "quick survey" methods in which questionnaires and clerks are used to extract volunteer information are probably as good a compromise as is available to the medical examiner at this time. In many cases included in our study it would appear that simple inspection by a thoughtful physician would have promptly eliminated the military prospect from the induction line.

Detailed consideration of the methods of recruit examination is beyond the scope of this presentation. We have touched upon this phase of military psychiatry only to point out that the problem is complex and the solution has not yet been attained.

These studies of the functional nervous disorders encountered in the military service may be summarized as follows:

1. Functional nervous disorders are a major cause of military non-effectiveness.
2. The underlying personality of the individual soldier developing the functional nervous disorder is the etiologic agent, rather than the military service per se. Military service does furnish an excellent medium for the growth and development of mental illness in susceptible personalities.

CLOSING DISCUSSION OF SYMPOSIUM ON THE PSYCHOSES AND PSYCHONEUROSES

Dr. Hervey Cleckley (Augusta): I was particularly interested in Dr. Steinman's remarks about electric shock treatment and the hypothesis he presented as a possible explanation of why patients recover. In some degree I am inclined to agree with him that amnesia may play a part in the change, especially in patients who merely improve but do not gain insight. When a patient, however, makes a good recovery and regains insight I do not think it likely that the mere negative change of amnesia is fundamentally responsible. In our experience we have found that the amnesia soon clears up but the improvement usually remains. It seems to me that the shock, in addition to producing a temporary amnesia, breaks down in some way the psychotic functioning which, while it prevails, prevents the patient from seeing the situation and from making effective efforts to readjust himself.

The psychosis, whatever else it may be, is, I believe, a faulty attempt to adjust in life and this faulty attempt consists of many processes which act in a vicious cycle. There are so-called secondary gains in such an illness and the patient's compensatory symptoms and his efforts through projection to avoid facing the actual issue are, in a sense, a comfort though a faulty comfort, and so long as he depends upon them it is difficult for him to make any progress or for ordinary reasoning and persuasion to affect him. I believe that the shock in some way breaks down this established functioning of faulty functioning long enough to help the patient see his situation somewhat more nearly as others can see it.

We have used curare and beta erythroidine hydrochloride in the convulsive therapy. We used them regularly with metrazol therapy and found them both satisfactory as a means to prevent fractures and other injuries. With the electric shock treatment we have had no vertebral injuries and we feel that, immobilizing the patients as we do, there is not a need to run the slight additional risk involved in the use of either of these drugs. Should in the future we meet with any accidents while using our present methods, I should be inclined to use the curare.

Dr. E. H. Parsons, (Lieut. Colonel, M. C., U. S. Army, Lawson General Hospital, Atlanta): I would like to say to you gentlemen that we of the Army, in presenting this data, are not implying any criticism of the very splendid work which many of you have done with the Selective Service. I fully realize the tremendous problem involved in screening from the military service those inapt personalities who cause us considerable difficulty. That you have done your work well is indicated in the lowered incidence of neuroses in the U. S. Army in comparison with that of other armies. With reference to the suggestion that the neurotics and psychotics in remission be used in the military service, I must say that I feel this is entirely impracticable. This was attempted in World War I by the German Army with disastrous results so far as the military service was concerned. While it is evident that there is a tremendous loss of man power in terms of the total need of the nation, in this group of cases, it is also true that these individuals who are unable to earn their way and accept the responsibilities of adult life in civilian occupations are definitely harmful to the military service. He who will not fight runs and running is tatically disastrous. There is no place in the combat zone for the psychopathic personality. Such personalities in civilian life, bolstered by their families and engaged in occupations with which they are familiar, may be of tremendous value to the state, but there is no place in the armed forces for the individual who has a nervous system in any way afflicted. Many of these men are highly patriotic, highly intelligent and sometimes our rejection or discharge of them looks foolish to the uninitiated, but may I say, as a soldier as well as a physician, that this is the only reasonable practice. I do not believe that we dare relax our Selective Service requirements in any degree. I do not believe that we dare put in uniform any individual who has not adapted to the requirements of civilian life, because when this has been done there have resulted unfortunate occurrences. These unfortunate occurrences in the military service are mixed with high speed machinery, high explosives and many surrounding individuals, so that these personalities affect adversely not only themselves but all of those who surround them.

May I express my sincere appreciation at being permitted to participate in this meeting with you. It is a pleasure to serve in your State and a particular pleasure to join you in your annual meeting.

Dr. H. D. Allen (Milledgeville): In order not to be misunderstood I should like to stress one point. None of the patients suffering from involutional psychosis recovered with only the administration of stilbestrol. A causal relation is suggested in the observation that the reaction to stilbestrol as shown in the vaginal mucosa is different in the patient when the psychosis is in remission than when the psychosis is continuing. I have had one patient with paroxysmal vaginismus who seemed to get complete relief from a single intramuscular injection of 1 mg. of stilbestrol in oil at the time of one of her paroxysms. Her condition could easily have been mistaken for an hysterical reaction or even possibly an acute psychotic agitation.

In the series of cases of chronic psychosis associated with surgical removal of the ovaries or suppression of the ovaries with x-ray, seven showed slight improvement under stilbestrol therapy. These cases, however, were mentioned only as of interest in determining the reaction to the smaller doses of stilbestrol.

Dr. James N. Brawner (Atlanta): It should be of benefit to all of us to know that experiments recently have been carried out which show that people who receive an adequate diet, one milligram of thiamine each day, is enough to keep them in an optimal state of health. In nutritional break-downs, however, vitamins are given in larger quantities, at least for several weeks, to allow the patient to recover faster from his weakened condition. Thiamine chloride is usually administered in 15 mg. doses daily for a period of three weeks, when the amount given is reduced to 3 mg. daily. Nicotinic acid is usually given in 50 mg. doses three times a day, when later on the amount given is reduced to 10 mg. three times a day.

Dr. W. W. Young (Atlanta): I just want to stress and drive home two things in relationship to my paper and somewhat in reply to the last gentleman who discussed these papers.

In Dr. Metts' presentation is one of the most important factors involved in the so-called neurotic personality. The person with a goal of perfection tends to drive tacks with a sledge hammer. Therefore, he overdoes with the consequent fatigue.

Reports from England show that break-downs are not on the increase in civilian population. When break-downs occur, they occur because of dislocation of living habits and living routines, and they occur chiefly in the type of individual whom we speak of as a rigid personality, the neurotic personality. Col. Parsons referred to the "routine" addict. It is their dislocations and being put into more complex situations that breaks these people down and it is the fundamental neurotic characteristics which are responsible. It is not war or any particular situation except essential complexity that brings it about.

Let me stress again: The fundamentally neurotic personality is not adapted to the Army life.

Dr. C. G. Cox (Milledgeville): I wish to say that I feel greatly honored to be called on to discuss these papers. I have enjoyed the papers and think they are very timely and that they should be of interest to everyone practicing medicine.

I agree with Dr. Young in his conclusions regarding the reaction of different types of personality; and, also would wish with him never to hear the expressions "nervous" and "wrecked nerves." I think too often the neurotic patient is dismissed with the statement that there is nothing wrong. While there may be no physical changes, these patients are truly sick mentally and often more in need of proper treatment than the physically ill ones, for many physically ill patients will get well regardless of treatment, or with no treatment, but very few neurotics do.

Regarding Dr. Wahl's paper, I think "just talk" is frequently about the only treatment that is effective in these so-called nervous conditions. By "just talk" frequently the true cause of the condition can be found and corrected. One thing I would like to urge on the general practitioner is that after making a careful examination and eliminating any pathologic physical condition that a psychiatrist be consulted. Many neurotic patients are given sedatives and placebos for years, and their conditions become chronic and practically hopeless before psychiatric aid is called in.

As regards Dr. Brawner's paper, I would not feel qualified to discuss adequately this paper, but we at the State Hospital get patients frequently who have been mentally disturbed so long that marked nutritional disturbances have taken place and often complicate the mental picture to such an extent that it is impossible to make a correct diagnosis of the primary condition. On account of the reluctance of people in general to commit their relatives to the State Hospital, dehydration and malnutrition are frequently present in a marked degree. We use a great deal of thiamine chloride and nicotinic acid, and other B_1 preparations with good results.

I wish to endorse Dr. Metts' paper and realize that there are many cases of fatigue that are not recognized as such. We see many cases of active psychosis which are precipitated by fatigue, both mental and physical. This acts by lowering the patient's psychologic tension and resistance to both mental and physical illnesses. Many patients recover in our hospital with no treatment other than hospital routine. We feel that this is due to the fact that they get both mental and physical rest.

I enjoyed Dr. Cleckley's paper very much, and was quite interested in his results. I was possibly more interested in this than the other papers due to the fact that we have used electric shock treatment in a good many cases during the past five months. During this time, we have given approximately 2,050 electric shock treatments. We do not get convulsions with the low voltage as reported by Dr. Cleckley. We have not used the pre-treatment, atropine. We have had no serious accidents, but have had a few dislocated jaws and one dislocated shoulder, whereas with the metrazol we have had a number of fractured vertebrae and scapulae, and one humerus, in addition to dislocations.

The number of patients treated by electric shock is 122 with 31 now under treatment, making a total of 153. Of this number, 81 were in the manic-depressive group,

74 were recorded as improved and four unimproved. The improvement covers from slightly improved to complete recovery. Of this number, 15 were agitated manics, 41 excited, 25 depressed. The total number of dementia praecoxes treated was 31, 22 of whom were recorded as improved and this improvement varied from slightly improved to marked improvement; 9 were unimproved; 6 of these were paranoid type, and 3 of these were reported as improved. The number of cases of psychoneurosis treated was 12, and 10 were recorded as improved, and 2 unimproved. The rest of the cases treated were mental defectives, excited paretics, and other conditions.

The average number of shocks given was 14; the largest number given was 42; the smallest number was 1. Only 2 cases had to be discontinued on account of unfavorable reaction.

I feel that Col. Parsons' paper should be of great value to the physicians of the local draft boards. There is too much tendency in some places to send the ne'er-do-wells to the Army to make men of them. If they and their parents have failed to make men of them, the Army will also fail and these men are not only disciplinary problems personally, but are disturbing elements among the other men. From my experience in 1918 and since, as examiner for the Veterans' Administration, I have observed many cases that should never have been in the Army. It is regrettable that men are not given a psychiatric examination by their local boards. Often the local man is in possession of information that the Induction Board never comes into possession of.

I have had very little experience with the use of stilbestrol, but have found it of distinct value in a number of cases of severe dysmenorrhea, and in a few cases of post-menopausal psychoses.

Dr. J. A. Redfearn (Albany): Thirty years ago, if this subject had been brought up, it would have been discussed very little and summarily dismissed with the statement, "that is just a nervous case; she has hysterics and ought to be ashamed of herself." All of you older men have heard those remarks repeatedly.

I think it is very helpful to have this symposium. It is going to be of great help to all of us. Let us remember that these conditions include children and adolescents as well as adults. It is estimated that anywhere from 40 to 50 per cent of the patients whom we see in general practice have some form of mental disturbance. All of you men have treated these patients frequently. Maybe oftentimes suggestive therapeutics did good and you didn't even know it. I think sympathetic understanding, kindness and being kind and helping to overcome certain worries and anxieties in this neuresthenic group is of very great aid.

The psychoses, I think we should recognize. The paranoids, we should refer. I don't think there is much we can do for them. The paranoids that I see occasionally, I refer, and it has been my duty to tell the families that it is a permanent condition of insanity and there is very little hope of recovery.

It is very encouraging to hear Dr. Allen develop the points in treatment with stilbestrol.

The nutritional question that Dr. Brawner discussed is of interest. I think that when these patients come in complaining of vague symptoms we should remember that functional disturbances may account for such complaints entirely. I have seen young women with precordial pain, who could not tell their stories for a little while because they were emotionally up-set due to fear of heart failure. Physical study revealed no organic diseases. I don't think we are justified in dismissing symptoms or explaining them away until we have made thorough physical study of these patients and then sit down and explain that on one side are organic diseases and on the other are the functional disturbances. They may be overlapping. Explain that adjusting is essential to happy useful lives.

GEORGIA'S GREATEST NEED—A STATE TEACHING GENERAL HOSPITAL

ALLEN HAMILTON BUNCE, M.D.
Atlanta

The year was 1765. George III was in the fifth year of his reign over Great Britain. The ink was scarcely dry on the Stamp Act. The British Museum was only twelve years old. Louis XV of France had just lost the Seven Years War with Britain — and with it Canada. Catherine the Great had just begun her long and eventful reign over Russia.

Young John Morgan of Pennsylvania, fresh from his medical studies abroad, full of energy and enthusiasm[1] "proposed to the trustees of the College of Philadelphia the creation of a professorship in the theory and practice of medicine. At the ensuing commencement, Morgan delivered a noble and prophetic discourse, still pertinent, upon the institution of medical schools in America. The trustees were favorable to the suggestion; the chair was established, and Morgan himself was its first occupant."

William Shippen the younger, Morgan's friend and fellow student abroad, had begun a course of lectures in midwifery in 1762 and informal classes and demonstrations, mainly in anatomy, had been given in Philadelphia as early as 1750. But previous to that time young men in the colonies

[1] Commencement address, University of Georgia School of Medicine, Augusta, June 15, 1942.

desiring to study medicine had become apprenticed to established physicians and the more fortunate had completed their studies abroad.

Morgan was soon joined at the College of Philadelphia by Shippen, Thomas Bond, Adam Kuhn, trained by Linnaeus; and Benjamin Rush, then only twenty-four — forming a great faculty for the new school which granted the first medical diploma in America and which, in 1791, became the Department of Medicine of the University of Pennsylvania.

"Thirteen years previously the Pennsylvania Hospital, conceived by Thomas Bond,[1] had been established through the joint efforts of Bond himself and Benjamin Franklin. Realizing that the student (as Bond wrote) 'must Join Examples with Study, before he can be sufficiently qualified to prescribe for the sick, for Language and Books alone can never give him Adequate Ideas of Diseases and the best methods of Treating them,' Bond now argued successfully in behalf of bedside training for the medical students."

"Our first medical school was thus soundly conceived as organically part of an institution of learning and intimately connected with a large public hospital."[1] The faculty and students had "unobstructed access to the one hundred and thirty patients then in the hospital wards."

This sound beginning of medical education was soon followed by "medical institutes" at King's College in New York in 1768, Harvard College in 1783 and Dartmouth College in 1798.

The American Revolution and the rapid growth of the new country disrupted medical education. Soon after the turn of the century medical schools sprang up all over the country without any university connection or any university standards. In reviewing the history of medical education in 1910 Abraham Flexner stated that 457 medical schools had been started in the United States and Canada in little more than a century and that 155 were still in existence. The great majority of those could by no stretch of the imagination be called real colleges.

"As far back as 1835 the Medical College of Georgia had vainly suggested concerted action looking to more decent methods; but no step was taken until, eleven years later, an agitation set up by Nathan Smith Davis (of Dartmouth) resulted in the formation of the American Medical Association."[1]

Founded in 1847 the American Medical Association's committee on medical education reported the following year, 1848, as follows:

"1. Resolved, that this Association consider defective and erroneous every system of medical instruction which does not rest on the basis of practical demonstration and clinical teaching; and that it is therefore the duty of the medical schools to resort to every honorable means to obtain access for their students to the wards of a well-regulated hospital.

"2. Resolved, Therefore, that this Association earnestly and respectfully appeals to the trustees of hospitals to open their wards for the purpose of clinical instruction, satisfied that they will thereby more efficiently aid the cause of humanity, and more perfectly accomplish the benevolent intentions of the charity."[2]

Little was accomplished because of the great number of solidly entrenched proprietary schools and the clashes of local interests. But many physicians, still struggling with the problem, got the American Medical Association to form the Council on Medical Education in 1904. Under the able leadership of its secretary, N. P. Colwell, much valuable information was obtained but much opposition was encountered, principally from the poorer schools.

At this juncture a most important factor in medical education in the United States and one which was to influence it for many years occurred. The Council invited the Carnegie Foundation for the Advancement of Teaching to undertake an impartial study of all medical schools in the United States and Canada. At a meeting of the Council in New York on December 28, 1908,[2] the Foundation agreed to undertake the study and commissioned Mr. Abraham Flexner to do so. In company with Doctor Colwell, secretary of the Council, he visited and studied all schools teaching the healing art in the United States and Canada.

Flexner's report, published by the Carnegie Foundation in 1910, marked the be-

ginning of the great revolution in medical education in the United States and Canada. The facts revealed were of more power than any other argument. Of the 155 schools then in existence only "thirty-odd" were supplying "the distinctly better quality of medical training."

At that time, in Atlanta, students were not admitted to the obstetrical wards and in all other wards it was necessary to obtain the permission of patients before they could be seen by the students. In Birmingham gunshot and other wounds were decidedly abundant — obstetrical cases rare. In Augusta it was reported that only two postmortems had been done in the City Hospital in six years and the obstetrical "cases came mostly at night and you can't get the students."

At the time of Flexner's report in 1910 only two state university schools of medicine owned and controlled general hospitals which were used for the care of the indigent and for the teaching of medical students— the University of Virginia Department of Medicine organized in 1827 and the University of Michigan Department of Medicine and Surgery organized in 1850 and called University of Michigan Medical School since 1915. Both these medical schools were in relatively small cities. Charlottesville with a population of 7,307 at that time had its University Hospital of 100 beds which was "the laboratory of the clinical teachers." Ann Arbor, with a population of 14,734, had every bed in its University Hospital used for teaching purposes. Virginia now has a hospital of 525 beds and Michigan 1,200—all still available for teaching.[3]

These two state schools and Johns Hopkins were the only schools in the United States with their own general hospitals in 1910. Now 16 state medical schools have state general hospitals for teaching purposes with an average of over 500 beds each.[3] In addition several other state schools control hospitals for their teaching.

These state general hospitals conducted by the university schools of medicine have the following[4] "four primary functions: (1) the kindly, sympathetic and skilful care of those who are ill; (2) the teaching of medicine at the bedside to the end that well-trained physicians may be prepared to minister to the people; (3) the dissemination of information about health and the prevention of disease, information that the public should acquire and has a right to know; and (4) the advancement of the boundaries of human knowledge."

Our University of Georgia School of Medicine here in Augusta has the laboratory and research facilities and trained scientists — physicians and surgeons — workers to form the teamwork necessary to give patients the very best medical and surgical care. These teachers and facilities, at the same time, furnish the ideal combination of conditions for the training of young physicians. Hence, this is the logical place for Georgia's State General Hospital.

General hospital needs in Georgia are acute and will become much more so after the present war is over. Only a few of our 159 counties have sufficient people and money to support a general hospital. Many of our small private hospitals are rendering invaluable service in their communities but, often, they cannot afford the equipment and trained personnel necessary for the best medical and surgical treatment. Furthermore, many persons with curable diseases need special laboratory, x-ray and research study which might be had at a state general hospital. These are impossible in many of their respective communities. Thus the talents of the many able scientists on the faculty of the University of Georgia School of Medicine could be used in treating her sick and disabled citizens. An outpatient clinic for ambulatory patients should be an integral part of the set-up. Here patients from all over the State could come for examination and diagnosis. When they return to their homes their treatment could be continued by their family doctors.

The State has a definite obligation to its citizens in the matter of health and education. All hospitals and colleges are public service corporations responsible to the people. The people must have medical services and educational facilities and the services and facilities must come up to certain mini-

mum standards. Medical services are a public necessity and they must be furnished to the people. We must expect more — not less — governmental participation in the practice of medicine. Therefore, it is essential that we be prepared to guide that participation so that the high standards of the profession may not be lowered.

The tempo of the advance in the medical sciences will be greatly accelerated by the war. The medical and surgical specialties will accomplish what even at this time, seems impossible. Therefore, now is the time for us to make a beginning—if necessary, in a very modest way — so that Georgia may have a real state general hospital for the treatment of the ill and the teaching of medicine and the allied sciences.

Teaching hospitals are notable for their wholesome atmosphere coupled with the scientific spirit of study and unselfish devotion to the solution of difficult problems of diagnosis and treatment and the desire for the advancement of human knowledge. Such a state general teaching hospital here will furnish additional clinical facilities for those students who follow you who are about to depart for more fertile fields and will form a mecca to which you will return for further study and a rededication of your talents to this great profession of ours which has as its prime object the service it can render to humanity.

Yes, Georgia's greatest present and future need is a state general hospital right here in Augusta as an integral part of the University of Georgia School of Medicine where it can serve all the people all the time.

REFERENCES

1. Flexner, Abraham: Medical Education in the United States and Canada, The Carnegie Foundation for the Advancement of Teaching, Boston, 1910.
2. Medical Education in the United States 1934-1939, Council on Medical Education and Hospitals of the American Medical Association, A.M.A., Chicago, 1940.
3. Hospital Service in the United States, J.A.M.A. 118:1053 (March) 1942.
4. Cutter, Irving S.: Address at Formal Dedication Exercises of University of Maryland Hospital, Bull. School Med. Univ. Maryland 19:157 (April) 1935.

The Journal *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

CHRONIC PANCREATITIS WITH CONGESTIVE SPLENOMEGALY AND ESOPHAGEAL VARICES

Martin S. Belle, M.D.
Atlanta

As early as 1910 Warthin[1] questioned Banti's original idea that a toxin caused congestive splenomegaly which began primarily in the spleen and later produced cirrhosis of the liver. More recently McMichael[2] who first suggested the term "portal hypertension" intimated that this condition could occur in the absence of cirrhosis. Rousselot[3] has demonstrated this fact to be true. He believes that "portal hypertension" is secondary to one of a variety of totally unrelated diseases, and pressures measured in the splenic vein at the time of operation showed no matter what the etiologic factors of the "portal hypertension" that there is an increase in pressure in the splenic vein as compared to controls with splenic lesions of other types. He enumerates the following classification of the etiology of congestive splenomegaly:

I. Obstructive factor known
 A. Cirrhosis of the liver.
 a. Laennec's cirrhosis.
 b. Unclassified cirrhosis.
 c. Cirrhosis due to Schistosomiasis Mansoni.
 B. Thrombosis of splenic vein.
 C. Cavernomatous transformation of the portal vein.
 D. Stenosis of portal vein.
 E. Tumor.
II. Obstructive cause unknown.

Thompson[4] reiterates Rousselot's idea and states that congestive splenomegaly is the result of mechanical obstruction to the flow of blood within the portal system and that the site and character of the obstruction must be such that a chronic increase in splenic vein pressure will occur while the venous pressure of the peripheral circuit is approximately normal. He believes that the differential in the head of the pressure is the actual cause of splenomegaly and that this explains the collateral circulation; with the high portal pressure and relatively low venous pressure, and absence of valves in the portal system, a reversal in the direction of blood flow is the direct result.

Grady Hospital, Emory University School of Medicine, Atlanta, Ga.

The following case report demonstrates an extrahepatic cause of increased pressure in the splenic vein; that is, chronic pancreatitis with fibrosis and compression of the vein with resulting splenomegaly and esophageal varices, death being due to hemorrhage from the varices.

Report of Case

C. I. B., white female, aged 63; housewife. First admission to hospital Oct. 27, 1936. Patient stated that she had had mild indigestion at irregular intervals for several years. Ten months prior to entry to hospital she experienced an attack of severe cramping pain in the right upper quadrant and across the upper abdomen associated with much nausea and vomiting. At that time she was treated for gallbladder disease by a physician with some improvement after a month, but she continued to have frequent attacks of right upper quadrant pain, nausea, and vomiting over a period of several months. These attacks were not related to any particular type of food. Soon her symptoms gradually subsided, but since then at irregular intervals she continued to have mild right upper quadrant pain and dyspepsia associated with vomiting. More recently her appetite had been poor and general malaise had been present; also there had been some loss of weight.

Five days before admission, Oct. 22, 1936, she had another attack of severe right upper quadrant pain associated with much nausea and vomiting and about 8:00 p.m. on the day prior to admission, she vomited a large amount of dark clotted blood. Thereafter, repeated hematemeses occurred and approximately three quarts of blood were lost.

At admission physical examination showed a temperature of 98.2 degrees, pulse of 160, and respiration 30; blood pressure was 80 systolic and 50 diastolic. The patient was well developed, moderately obese, and in a state of mild shock with cold and clammy extremities. She had mild respiratory difficulty and appeared pale. The heart was moderately enlarged to the left, and the abdomen showed moderate tenderness over the epigastrium and along the right costal margin. No masses were felt. Otherwise the physical examination was not remarkable.

On admission laboratory studies showed a red blood count of 3,000,000, homoglobin of 55 per cent (Sahli), and a white blood count of 12,200 with 69 per cent polys. and 31 per cent lymphs. Urinalysis showed a specific gravity of 1.013 with two plus albumin and innumerable white blood cells. The blood Wassermann was negative. During her hospital stay she continued to have pain and recurrent signs of bleeding with tarry stools and hematemeses. Upon dismissal gastro-intestinal series showed a constant defect on x-ray films which was not demonstrated on fluoroscopy; the impression of the radiologist was probable gastric ulcer. Also the red blood count was 2,300,000 and the white blood count was 7,150.

After the first admission the patient subsequently had six hospital entries, each time remaining about two weeks. With each episode she was admitted in shock and the history was that of vomiting blood, epigastric distress, and tarry stools. Further laboratory studies showed free hydrochloric acid in the stomach but repeated gastro-intestinal series demonstrated no filling defect in the stomach as had previously been described. On the fourth admission, Sept. 30, 1939, she had a fasting blood sugar of 250. The gastroscopic examination at that time showed a chronic hypertrophic gastritis with areas of ulceration, but no bleeding points were found. On her sixth entry, April 27, 1941, fluoroscopy showed herniation of the stomach (diaphragmatic hernia) which apparently had been present all the time. On this hospital stay it was also noted that the urine contained two to four plus sugar with a fasting blood sugar of 200. On the seventh and last admission, May 22, 1941, she entered with the same story of recurrent hematemeses and was in profound shock. The next day she vomited two quarts of bright red blood and remained in shock for approximately 24 hours until the time of her death. The urine at that time showed a two plus sugar, one plus acetone and a trace of diacetic acid.

Postmortem examination showed grossly: (1) chronic interstitial pancreatitis and a chronic peripancreatitis with partial constriction and tortuosity of the accessory portal veins of Sappey (marked dilatation of veins of hilus of spleen, communication with the veins of the diaphragm and of the esophagus); (2) splenomegaly with hemorrhage into the spleen; (3) marked esophageal varices with partial thrombosis and rupture and with massive hemorrhage into gastro-intestinal tract; (4) hematemesis with aspiration of blood into the lungs; (5) chronic cholecystitis with cholelithiasis (one small bluish-white stone), and (6) moderate chylous ascites.

There was a marked increase in the fat and connective tissue which was very firm to palpation, and which surrounded the portal vein, common bile duct, hepatic artery and the pancreas in its entire aspect. As this fat and connective tissue were dissected away from around the pancreas occasional pale soft white irregular areas were seen in the fatty tissue. The terminal portion of the splenic vein which was small in diameter was lost in the mass of fat and connective tissue; therefore, the splenic vein was dissected out with difficulty and followed only for a short distance. However, the proximal portion of the splenic vein was easily seen because it was markedly dilated and slightly tortuous. A good view of the external surface of the pancreas was not seen due to the close connection with the massive fat and fibrous tissue. The pancreas was small in antero-posterior diameter and was probably slightly shorter than usual. Innumerable cut sections through the pancreas revealed apparently isolated areas of pancreatic tissue, which was very firm to palpation, separated by thick fatty connective tissue alone.

Microscopic sections of the pancreas showed a marked increase of numerous very wide connective tissue bands which protruded into the lobules and divided them; also, there was a marked increase of the connective tissue between the lobules. In places this connective tissue was so marked that there appeared to be lateral

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★ THE PRESIDENT'S PAGE ★

THE PATIENT

Thinking of the patient as a sufferer from organic diseases was the rule among doctors generally until recent times. Drugs and operations proved inadequate treatment in perhaps a third of sick people. Naturally, dissatisfied patients tried many and varied forms of treatments; namely, rubbing, massage, adjusting, heat, cold, blessings, etc., while puzzled physicians wondered about a plan of treatment. Some affable, successful, short-tempered practitioners were inclined to abuse rather than sympathize, hoping to help such individuals. This, too, failed. Gradually we learned that sympathetic understanding and guidance filled the needs of most sufferers in this group.

Functional disorders, the psychiatrists told us, accounted for complaints in perhaps 25 per cent of our patients whose symptoms suggested diseased organs which, upon examination, were found normal. Furthermore, there was an overlapping field of perhaps 25 per cent where both organic diseases and functional disorders were associated.

So it is very important that we study an individual who complains of diseases or disorders which he attributes to head, heart, stomach, liver, kidney, gonads, etc. Doctors are not sure until they have examined carefully the organs accused whether the complaints have origin in diseased organs or spring from the nervous mental disorders. All symptoms complained of, including the most severe pain, may be functional.

You young men who form early habits from thinking in terms of organic diseases and functional disorders will have many appreciative patients who will often make you happy with their praises and recommendations.

We older men have seen many seeking in vain for still other drugs and operations for relief when they had already been unknowingly abused again and again.

This information was not generally known so doctors were not blamed for such practice, but it is different now. A removal of a spur, or tonsils, or fixing a uterus, repairing lacerations or administering drugs will not prove lasting benefits in treating functional disorders.

Treatment of the sick or well should begin with proper nutrition. For a time little or no food in an acute illness is all right. Chronic illness requires correct diet. It is surprising how many people who think they are well do not drink milk, the foundation of a balanced diet.

In functional disorders it is often beneficial for a few weeks to give extra vitamins. Many of these patients, particularly young adults, when given a balanced diet and told that adjusting to the difficulties at hand is the way out, soon learn to control their emotional responses when assured that their organs complained of are not diseased. I like to teach them not to depend on doctors, drugs, operations, rubbers, adjusters or blessers to separate them from their troubles and worries, but practice instead learning to control and live with these complaints for they are part of their very beings.

Organized Medicine

Our accomplishments are the results mainly of organized medicine which now needs our support more than ever. The call to war of our young doctors necessitates additional work by older doctors left behind. This in turn offers excuses for deferring district and other society meetings. The unselfish plan is to continue holding meetings regardless of the extra burdens or despite the rubber shortage, for our plan of the practice of medicine is more helpful to our patients and to ourselves than may be found elsewhere. Let us carry on so that when our young men return they can voice opinions and fight for their rights.

Training Schools for Nurses

Dr. Henry Poer has promised an early report regarding affiliation of the nurses' training schools of our small hospitals with those of large institutions.

J. A. Redfearn, M.D.

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THE PROCUREMENT AND ASSIGNMENT OF PHYSICIANS IN GEORGIA

Of interest to every physician in Georgia is winning the war. There is something for everyone of us, young or old, to do. The young doctors, up to 36 years, are within the original draft age, and have been asked by the Procurement and Assignment Service to apply for commissions in a branch of the military service of their choice, and not to wait until their numbers are called by the draft boards, for then they might be drafted as privates for military duty.

To facilitate this medical preparedness program The American Medical Association sent out three questionnaires to physicians in order to secure a complete roster of the doctors and to learn of their qualifications. The results of these questionnaires were tabulated, card-indexed, and deposited in the A. M. A. files in Chicago.

It was estimated by the Procurement and Assignment office in Washington that it would be necessary to call doctors up to 45 years of age to secure sufficient medical service for the armed forces as calculated to January, 1943. Every doctor under 46, therefore, has been asked to apply for a commission. Should he not be physically fit for military duty he will be so notified by his local draft board. Should he be considered essential for service to his community — whether for civilian practice, hospital practice, medical teaching, public health work or essential war industry — he should be so declared by the State Procurement and Assignment Committee.

Many differences of opinion arise as to who are "available" and who are "essential". The State Committee, in an effort to be fair to everyone, has written to every county medical society in Georgia asking that they call a meeting and among themselves determine who of the doctors of *that county* within the military age are "*available*" and who are "*essential*". Many county societies are cooperating whole-heartedly, and the State Committee is doing its best to carry out their wishes. Some counties have not sent in their lists and confusion has resulted. In a few counties there have been differences of opinion between the local county chairman and individual doctors as to who should be "available" and who "essential". In such cases the State Committee invites committees from those counties to bring their problems in person, and all try to reach an accord. At times the chairman of the Fourth Corps Area is called in for consultation and advice.

Georgia has two Class A medical colleges within her bounds, and those colleges have been asked to continue their courses in a manner not to jeopardize their standing. In both Augusta and Atlanta, the homes of these colleges, many men of military age are engaged in teaching and caring for patients in associated hospitals. Some teachers are full-time and classed as "essential". Others are part-time teachers and are necessary for the running of these colleges and hospitals. Many other teachers do part-time duty that can be replaced by doctors over 45, by women physicians, or by younger men who have physical handicaps. A committee from each college, together with the deans, are attempting to make these changes. Some men feel so keenly that this is their war, they apply for commissions even though they have been classed as "essential" for teaching. If they take this method of offering their services, neither the State Committee nor the deans of the colleges can say nay.

Many doctors over 45 years of age want to know what they can do to get in the service. For these we have heard but one answer: "Go back home; keep at work; allow a young man to go. This is a young man's war—a long war."

No fixed quota of population per doctor can be made a rule. Conditions vary widely in different localities. We have been assured that there will be a quota as to the number of doctors each state shall furnish and that it will be based on the population.

Our State is well near the top of the list and until more soldiers are called for, we will not have to furnish many more doctors.

W. A. Selman, M.D.,
State Chairman.

LISTENING AND LEARNING

Many physicians attending medical meetings listen to carefully prepared material, well delivered by able men on vital subjects, but fail to derive any great benefit. Too often it is because the practitioner goes to that meeting in a negative frame of mind. He listens more to find a statement he does not agree with, rather than to assimilate the useful information which is universally present, even though occasionally flooded by immaterial and unimportant statements.

The most useful education is attained by an open mind continuously searching for items of information and different points of view.

Most physicians are faced with the practical problems involved in their every day tasks and are prone to expect specific answers to specific problems which are facing them from day to day. If he attends a lecture with the expectation of having someone give him a clean cut solution to his particular problem he is doomed to disappointment. He should put himself in the speaker's position. How can the speaker possibly know the particular stumbling block which is confronting the individual practitioner? It would be necessary to have a personal consultation, furnishing to the instructor the history of the solitary case, and other necessary background, before the advice would be of any value. One should go to medical meetings seeking general information and particularly in quest of inspiration. When the speaker tells of his own difficulties and how he solved them; or he discusses other people's problems and how they were unraveled, the practitioner should be inspired to go back and to meet once again his own points to be solved with a better will and determination.

The committee in charge of the scientific program at any medical meeting is confronted by the question of whom they should ask to address the audience. If there are forty speakers on the program (as is usual in the MSMS Annual Convention) it is probable that not all will be exceptional speakers, or will have a paper interesting and worth while to each and every listener. If the physician is unfortunate enough to hear a poor speaker, or one who has a less expertly prepared subject, or a paper of no particular interest to him, he should be open minded enough to charge it up to profit and loss and not let it make him decide that listening to speeches is not worth while. If he were to give time (which might have been used for something else) to hear ten papers and only one of the ten papers given had a real message for him, all the time devoted to the other nine meetings could still be considered a good investment.

Every physician should attend hospital staff, county society, state society, and other conferences, with an open mind, expecting always to find items of interest and information which would broaden his understanding and scope of knowledge. He should not come to them with a negative attitude.

Too often the physician says: "I am not interested in this subject." "It does not pertain to my type of practice." "I would never treat a case of pneumonia, I am an otolaryngologist." "Reading an electrocardiogram is not of value to me in my specialty of urology." Perhaps he is right but the broadening effect of general medical education cannot help but improve the specialist in every field. Education can always be expanded and the mental processes stimulated. It is frequently difficult to associate the direct contribution to his ability to do his particular job but nevertheless occasionally he will find some apparently unrelated bit of knowledge or morsel of information of service in hitherto unsuspected ways, in his ordinary practice.

Mental growth is stimulated by continued effort.

—Jour. M.S.M.S., July, 1942.

In advanced asphyxia, after breathing has stopped, rhythmic inflation and suction of oxygen or oxygen-carbon dioxide (by means of an apparatus) at safe pressures is definitely superior to manual artificial respiration or rhythmic inflation (with an apparatus which blows air into the lungs without withdrawing it), George L. Birnbaum, M.D., and Samuel A. Thompson, M.D., New York, declare in *The Journal of the American Medical Association* for April 18 in the first of a series of papers on their investigations of various methods of resuscitation.

CHRONIC PANCREATITIS WITH CONGESTIVE SPLENOMEGALY AND ESOPHAGEAL VARICES

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compression of the acini with pressure atrophy of the lymphatics. From the thicker bands of connective tissue in the lobules there were fine connective tissue strands which penetrated between the individual acini and in some lobules the strands were so wide that there was complete replacement of the acini and only a few pancreatic ducts remained. Throughout the pancreatic cells were slightly affected with albuminous degeneration. The islets of Langerhans varied in size and were fairly numerous; their cells also showed albuminous degeneration. There were large bands of fatty tissue which covered the outer surface of the pancreas and in places penetrated between the lobules. The impression was marked irregular chronic interstitial pancreatitis.

The liver weighed 1800 grams and its inferior margin was rounded and reached the level of the costal margin; its superior aspect reached the middle of the fourth intercostal space on the right and the fifth on the left. Glisson's capsule was thin and transparent. The liver had a pale pink color which was diffuse and had a suggestive yellow tinge. On cut sections the lobules and triads were easily seen. The parenchyma was moderately firm and friable on pressure.

The spleen was markedly enlarged and weighed 470 grams and extended from the level of the eighth rib in the left midaxillary line to three centimeters below the left costal margin. Although generally flabby in consistency it was a little firmer along its superior pole where yellowish and bluish splotches were seen beneath its capsule. There were numerous venous sinuses which passed from the hilus of the spleen to the adjacent retroperitoneal abdominal wall and to the adjacent diaphragm, and these vessels were continuous with those vessels that traversed the inferior and superior surfaces of the left diaphragmatic leaflet. The splenic capsule was thickened and cut sections revealed numerous sharply demarcated, irregular, yellowish mottled areas and dark reddish irregular areas in the pulp. The latter were markedly firm to palpation and markedly congested.

Throughout all microscopic sections of the spleen there was a general increase of a delicate somewhat cellular collagen especially noted in the red pulp. The connective tissue appeared rather dense and in places seemed to narrow or obliterate the sinuses. The latter were not dilated and did not retain a large amount of red blood cells except in occasional irregular splotchy areas. Also, there was a diminution of the number of Malpighian corpuscles which were a little scattered at the peripheral portion whereas the central portion had an irregular, finely granular, amorphous pink staining albuminous degenerative substance. There was no unusual reticular cell or lymph cell hyperplasia. The trabeculae and the capsule were thickened and the arterioles had lumina which were somewhat narrowed by active hyalinization. The impression was congestive splenomegaly.

Comment

It is felt that with the history of acute pain in 1936, that most likely at that time the pancreatitis began. In the absence of other causes of "portal hypertension", the findings of a mild diabetes, and the duration of the hematemeses together with the postmortem findings led to the logical conclusion that chronic pancreatitis with fibrosis and compression of the splenic vein was the cause of this congestive splenomegaly. With this picture in mind and the diagnosis made premortem, surgery would be indicated and attempt made to relieve the splenic obstruction.

Summary

Case report of an extrahepatic type of congestive splenomegaly has been presented, the cause of the increase of splenic vein pressure being due to a compression of the splenic vein by fibrosis as a result of chronic pancreatitis.

The collateral circulation with communication between the veins of the hilus of the spleen and those of esophagus and diaphragm were demonstrated.

BIBLIOGRAPHY

1. Warthin, A. S.: Relation of Thrombophlebitis of the Portal and Splenic Veins to Splenic Anemia and Banti's Disease, Internat. Clin. Ser. 20, 4:189, 1910.
2. McMichael, J.: Pathology of Hepatolienal Fibrosis, J. Path. & Bact., 39:481 (Sept.) 1934.
3. Rousselot, L. M.: Late Phases of Congestive Splenomegaly, Surgery, 8:32-42 (July) 1940.
4. Thompson, W. P.: Pathogenesis of Splenic Anemia, Int. Med., 14:255-262 (Aug.) 1940.

"Philadelphia pharmacists, in a statement signed by several Pennsylvania physicians and pharmaceutic leaders, are being urged, in effect, to utilize their stores as prophylactic stations against venereal disease," *The Journal of the American Medical Association* says in its June 6 issue. "The drugstore is often the social center of a neighborhood. It is suggested that the socially minded head and personnel of such establishments can '(*a*) discourage off-color frequenters looking for pick-ups and trouble; (*b*) give friendly advice and even sober counsel to some who are obviously on the way to going wrong; (*c*) urge blood tests and medical examination on persons who are known to have exposed themselves.' The pharmacist is an educator, and the corner druggist's establishment can be as much of a center of public health as a physician's office, hospital or the health department in the city hall. The pharmacist behind the counter has the first chance to give or sell prevention to persons who may expose themselves to venereal disease, to give or sell prevention to persons who have been exposed already, and 'to sell the basic idea of a prompt accurate diagnosis and immediate treatment' to persons who describe a symptom or ask for treatment, attempt to purchase a proprietary remedy, tell a story that shows they are taking risks that they do not realize, or that they have consulted a quack. The pharmacist is urged to place the facts and aims of venereal disease control before the public, and the state pharmaceutic association is prepared to supply a card or posters for counter display and booklets for distribution to inquirers."

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

NURSES TO THE COLORS!

The Georgia State Nursing Council for War Service publishes the following report on priorities in nursing to meet the war emergency as defined by the National Nursing Council for War Service. 1790 Broadway, New York, N. Y.

You Should Serve with the Armed Forces if you are single, under 40, and are

1. Doing private duty.
2. On a hospital's general staff.
3. A head nurse not essential for teaching or supervision.
4. A public health nurse not essential for maintaining minimum civilian health service in any given community.
5. In a non-nursing position.
6. An office nurse.

You Should Serve At Home if you have a position

1. In a hospital which has a school of nursing as
 a. Administrator in a key position.
 b. Instructor.
 c. Supervisor.
 d. Head nurse, in position related to teaching or supervision.
2. In a hospital without a school of nursing, as
 a. Administrator.
 b. Supervisor.
3. In a public health agency, as
 a. Administrator.
 b. Teacher and Supervisor.
 c. Staff nurse essential for maintaining minimum civilian health services in any given community.
 d. Industrial nurse.

Nurses who are eligible and wish to enter military service should enroll in the First Reserve of the American Red Cross Nursing Service for assignment to the Army Nurse Corps or the Navy Nurse Corps.

Each nurse, and each agency employing nurses, is urged to get in touch with: The Local Nursing Council for War Service — for guidance as to the needs and distribution of nursing service. The secretary or chairman of the Local Committee on Red Cross Nursing Service, or the local American Red Cross Chapter — for information about enrollment in the First Reserve of the Red Cross Nursing Service for service with the Army or Navy Nurse Corps.

Continued and careful study, on the part of both agency and community, will be necessary to an equitable distribution of service. Geographic barriers must be set aside to meet the greatest need wherever it exists.

Every graduate nurse in the United States is fighting this war. Some of those on the "home front" are giving service as vital as those with the fighting forces. Yet the pressing military needs must be met. The Army and Navy are now asking for 3,000 nurses a month!

Are you among those who can be dispensed with at home and who therefore should enroll for military service? The answer is not easy. You may be unable to decide for yourself. The leading representatives of the nursing profession and the lay leaders of your community, upon whose shoulders rests the responsibility for providing nursing services at home, may need to help you.

To aid you in reaching a wise decision — to help thousands more like you to decide so wisely that the nursing emergency will be met — the National Nursing Council for War Service has prepared these classifications. It points to the answers for you, yourself, and for the Local Nursing Council and the employing agencies to which you might take those questions which have been keeping you awake nights: "What is my place? Am I now serving where I am most needed? Or should I be working elsewhere?"

In order to reach the right decisions, both you and your advisers must make four basic assumptions:

1. The armed forces must have adequate nursing care.
2. There are not enough additional nurses to allow "service as usual."
3. Voluntary adjustment of supply and distribution of nursing service is the national policy in the present state of the war.
4. "All out" assignment of nurses eligible for military services may be made necessary by changing war conditions. If it does, revision of the classifications will result.

The questions to be answered in every community are these:

1. Where are nurses now?

2. Where should they be?
3. How can the most necessary of their peacetime services be carried on when such large numbers have been assigned to the armed forces?

Obviously you, an individual nurse, cannot alone answer these questions. They must be faced in a spirit of selfless and patriotic cooperation. Local Nursing Councils for War Service are urged to set up immediately a Committee on Supply and Distribution, which will make a study of needs and resources *of that particular community*.

Resources to be considered are not only nurses actively employed. There are also inactive nurses, nurses working in non-nursing positions, student nurses, nurses' aides, other volunteers and paid military workers.

The aim of this study should be to get every nurse into the place where she is most needed. Such reshuffling of activities should eliminate duplication of nursing services, luxury nursing, and employment of nurses in non-nursing positions.

The war must be *won!*

DURICE DICKERSON, R.N., *Executive Secy.*,
Georgia State Nurses' Association.

NEW DEFENSE DIET APPEALS TO HOME

A diet "yardstick" of practical daily use in creating a foundation for the new American defense nutritional standards should include, according to the National Dairy Council, these foods:

Milk—2 or more glasses daily for adults; 3 to 4 or more glasses daily for children—to drink and combined with other foods.

Vegetables—2 or more servings daily besides potato—1 raw; green and yellow often.

Fruits—2 or more servings daily, 1 citrus fruit or tomato.

Eggs—3 to 5 a week; 1 daily preferred.

Meat, Cheese, Fish, or Legumes—1 or more servings daily.

Cereal or Bread—most of whole grain or "enriched."

Butter—2 or more tablespoons daily.

Other foods to satisfy appetite and complete growth and activity needs.

Among all the foods in the "yardstick," says the Dairy Council, milk and dairy products are of major importance. Milk is an indispensable part of the daily diet because it is the only practical source of calcium. It also provides proteins of highest quality, and vitamins A, B_1 (thiamine), and G (riboflavin).

The U. S. Bureau of Home Economics has planned diets for families at different income levels. Each plan includes foods from the same food groups, but in different quantities, depending on the amount of money available. The moderate-cost adequate diet provides the following amounts of milk for each member of the family each day:

Milk (to drink, in cooked food, or as cheese).

4 cups daily for each child.

1 quart daily for an expectant mother.

1½ quarts daily for a nursing mother.

3 cups daily for each other adult.

The plan for liberal diet differs from the moderate-cost adequate diet in that three to four cups of milk daily are recommended for adults.

MICROSCOPES NEEDED

Because of increased enrollment and because of the inability to buy microscopes at any price, the Emory University Medical School is making an appeal to borrow instruments for the duration. About 100 microscopes are needed.

Doctors who have unused microscopes which they would be willing to lend the Emory Medical School are asked to contact Dr. John H. Venable of the Emory Medical School.

Dr. Venable lists the following specifications for microscopes needed:

Manufacturers: Spencer Lens Company, Bausch & Lomb, Zeiss, Leitz.

Model: Binocular, monocular—inclined or vertical tubes.

Optics: Oculars— 1 5x; 1 10x or the equivalent for the monoculars; a pair of each for the binoculars.

Objectives: 16mm achromatic, 10x; 4mm, achromatic; 30x; 1.8mm, achromatic (oil immersion) 90x or equivalents.

Accessories: Sub-stage condenser with diaphragm; sub-stage mirror; mechanical stage.

PLEDGE TO AMERICA

On the eve of the Civil War a doctor, Benjamin Morgan Palmer, privately pledged his allegiance to his country. This was spoken in 1860, but the eloquence of his expression remains and today again, as we face a new danger, we may pause to repeat this doctor's love for America and share, more than eighty years later, his faith in and his love for our native land.

"Whatever be the fortunes of America, I accept them for my own. Born upon her soil of a father thus born before me, from an ancestry that occupied it while yet it was a part of England's possessions, she is in every sense my mother. I shall die upon her bosom. She shall know no peril but it is my peril, no conflict but it is my conflict, and no abyss of ruin into which I shall not share her fall. May the Lord God cover her head in her day of battle."—*Journal of the Tennessee State Medical Association.*

The "Keep Well Crusade," recently launched by the life insurance companies as an important contribution to the war effort, has won the unqualified support of men prominent in medical fields throughout the country. And deservedly so.

Conducted by public spirited insurance agents in their communities, the scope as well as the primary objectives of the crusade are admirably outlined by Holgar J. Johnson, President of the Institute of Life Insurance.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

THE GEORGIA CANCER CONTROL PROGRAM

State-wide programs of cancer control have been inaugurated in the United States only in recent years. In no state has the program been in operation sufficiently long to provide a true picture of what such organized effort may ultimately be expected to accomplish. Sufficient experience has been gained, however, in the application of modern methods of therapy to various types of cancerous lesions to indicate that the results will vary roughly with the proportion of patients receiving treatment during the early stages of the disease.

The need for concerted effort in the interest of control is shown by the steady rise in cancer mortality. Due chiefly to improved diagnostic methods and an increase in the proportion of people in the older age groups, the reported crude death rate from cancer in the United States has approximately doubled in the past 40 years. In 1910 cancer ranked seventh among the leading causes of death: today it ranks second.

Deaths from cancer in Georgia are occurring at the rate of about 2,000 per year. Results obtained with adequate treatment of early lesions indicate that fully one-third to one-half of these deaths could be prevented.

With respect to the prevalence of cancer in Georgia, recent surveys indicate that there are at least 8,000 living cases in the state at the present time. Of this number, perhaps a fourth or a third are early cases which could be cured by adequate treatment. An additional group would receive much benefit from treatment and in many instances the lesion could be arrested. The remaining cases are hopelessly incurable. Though the number of advanced cases constitutes a large proportion of the total living group, it must be remembered that all of them were in an early stage at some time.

The Georgia Cancer Control Program has been directed at two main objectives: (1) Provision of adequate treatment facilities for all citizens of the state and (2) an educational campaign to familiarize all groups of citizens with the early signs and symptoms of cancer. The program represents a cooperative effort on the part of the Medical Association of Georgia, the Women's Field Army of Georgia and the Georgia Department of Public Health.

The Medical Association of Georgia has been working for many years in the interest of cancer control. Through the efforts of its Cancer Commission it has been largely instrumental in initiating and guiding the policies of the control program.

In 1936 the American Society for the Control of Cancer created, as a part of its activity, a national body of women known as the "Women's Field Army Against Cancer." The main objective of this group is the education of lay persons, especially women, with respect to the danger signals of cancer. In order to accomplish this result most successfully an enlistment campaign is conducted annually in April during which time as many persons as possible are asked to join the field army.

The Georgia Division of the Women's Field Army has shown phenomenal growth and its activities have increased accordingly. At the present time educational campaigns are in progress in all parts of the State.

In 1937 the Georgia Legislature enacted into law a measure designed to provide facilities for the treatment of indigent cancer patients. The sum of fifty thousand ($50,000) dollars was appropriated to carry out the purposes of the Act. Responsibility for administration of the program was placed with the Georgia Department of Public Health.

Policies governing the administration of the State-aid Program were formulated by the Department of Public Health working in close cooperation with the executive committee of the State Cancer Commission. Changes in policy or the formulation of new ones have always been approved by the executive committee before being put into effect.

At the present time there are twelve state-aid clinics in operation in various parts of the State. All of them are well-equipped and rendering excellent service. Certain minimum fees are paid to the clinics for such services as hospitalization, use of operating room, microscopic examination of tissues, radiation, etc. In every instance the fees paid by the State are well below the usual charge for such service. In this connection, too, it should be emphasized that the physicians attending the clinics donate their services free of charge.

Any licensed physician in Georgia may make application for state-aid in behalf of any resident of Georgia who in his opinion has or may have cancer and who is unable to pay for treatment. Application forms for this purpose are supplied by the Georgia Department of Public Health. The application must also be signed by the director of the County Welfare Department who certifies that the patient is unable to pay. Following receipt of such application the pa-

tient is referred ordinarily to the nearest clinic.

If the clinic finds that the patient has cancer appropriate treatment is given provided the case is not so far advanced as to offer no hope of arrest. Hopelessly incurable patients are not treated. Likewise, if the patient does not have cancer no treatment is given and the case is referred back to the family physician.

The State-aid Program has been in operation a little less than 5 years. During this period approximately 7,000 patients suspected of having cancer have been referred to the twelve clinics. Increasing interest in the program is indicated by the steady rise in the number of applications received. Each year since the program started the number of applicants has increased by about 20 per cent over the preceding year.

During 1941 a total of 2,010 patients reported to the clinics for the first time. Of this number 1,272 were found to have cancer while 738 were diagnosed as having non-malignant disease. An additional group of 279 cancer patients on whom treatment was begun prior to January 1, 1941, were, likewise, treated during the year. Thus, a total of 1,551 cases of cancer received treatment during 1941. This figure represents approximately 20 per cent of the estimated total number of cancer cases in the State. The average cost to the State for the treatment of these patients amounted to $42.83 per case.

It is still much too early to attempt any detailed evaluation of the results of the program. Obviously, it is not possible, as yet, to speak of 5-year cures. The results obtained in many cases over shorter periods of time, however, offer much encouragement.

The least satisfactory aspect of the program is the high proportion of cases which have reached an advanced stage of the disease before reporting for treatment. This is not an unusual occurrence, however, and it might reasonably be expected. The program is comparatively new and the groups which are eligible for state-aid are those most difficult to reach through educational measures. Definite improvement in this respect has been noted from year to year, however, and with continued effort in the future it should be possible to reach a high proportion of these cases in time.

W. J. MURPHY, M.D., Director
Cancer Control Service.

The 1942 Clinical Congress of the American College of Surgeons, originally scheduled for October at the Stevens Hotel, Chicago, which was taken over August 1 by the United States Army Air Corps, will be held in Cleveland, with headquarters at the Cleveland Public Auditorium, from November 17 to 20, according to an announcement from the College headquarters in Chicago. The twenty-fifth annual Hospital Standardization Conference sponsored by the College will be held simultaneously.

ASSOCIATION OF AMERICAN RAILROADS

MEDICAL AND SURGICAL SECTION

Report of Committee on Disability and Rehabilitation

To the Editor:

I take the liberty of enclosing herewith copy of Circular M&S-230, Medical and Surgical Section of the Association of American Railroads,—this circular being a Report from the Committee on Disability and Rehabilitation for the year ending May 1, 1942.

Beginning on page 2 of this report is an item entitled "Chemotherapy". Under this heading (on page 3) is quoted a letter received by myself under date of June 31, 1941, from Dr. Thomas A. Storey, Special Consultant of the American Social Hygiene Association, Inc., of New York City, asking if we had run across cases of confusion following treatment with the Sulfa drugs, particularly Sulfathiazole.

The Committee on Disability and Rehabilitation, of which I am the chairman, undertook an investigation which reveals the fact that there is frequently a period of confusion following the administration of the Sulfa group of drugs, and it has been recommended to the Association of American Railroads that where a patient is known to have received treatment of this type he should be given from one to two weeks following the administration thereof to regain his normalcy before being permitted to resume duties in engine and train service.

We also make note in our report that it would be very timely and advantageous if editorials were published in leading medical journals treating upon the dangers of the practices of casual administration of such drugs.

On page 3 of the report is another item entitled "Effects of Drugs, Casually Administered", and this deals with other drugs coming under this same heading, which are so frequently prescribed by physicians for ambulatory patients without thought as to the results which may temporarily follow such administrations in the disturbance of their normal functions and mental stability.

The Committee of Direction from the Medical and Surgical Section of the Association of American Railroads has suggested the advisability of my communicating with editors of the chief medical publications, requesting that editorials be prepared and published, calling attention to the dangers of the practice of prescribing these drugs and permitting the patient to leave without being kept under observation. We feel the drugs are very important, but we also feel their misuse may bring as much calamity as their proper use may bring good.

I have noted in some lay journals, articles along this line which reach the public—rather than the profession, but it is the physician who does the prescribing of these drugs first and therefore the matter should be brought to his attention primarily.

J. R. GARNER, M.D., *Chairman*,
Committee on Disability and Rehabilitation,
Medical and Surgical Section,
Association of American Railroads.

WOMAN'S AUXILIARY : OFFICERS 1942-43

President—Mrs. J. Lon King, 223 Buford Place, Macon.

President-Elect—Mrs. Wm. Bruce Schaefer, Toccoa.

First Vice President—Mrs. Harry M. Kandel, 432 Abercorn Street, Savannah.

Second Vice President — Mrs. Walter G. Elliott, Cuthbert.

Third Vice President — Mrs. Ralph W. Fowler, Marietta.

Recording Secretary—Mrs. J. C. Metts, 303 Anderson Avenue, Savannah.

Parliamentarian—Mrs. S. T. R. Revell, Louisville.

Treasurer—Mrs. Lucius N. Todd, Rural Delivery No. 2, Augusta.

Historian—Mrs. Jack R. McMichael, Quitman.

Corresponding Secretary—Mrs. Wallace L. Bazemore, 127 Beverly Place, Macon.

Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta

Mrs. King's Message

Mrs. J. Lon King, of Macon, president of the Woman's Auxiliary to the Medical Association of Georgia, sends the following message to district managers: "It will be almost compulsory for me to depend on the district chairman more than ever this year. It is war time and many a time I will be unable to be with you at your district meetings. If the government will not further ban people from traveling I may get around to them. But if it does, I will be unable to do so. If I do not, let us all realize it is not a lack of feeling the responsibility or indifference but a necessity forced on me. But let us go on with the plans that are made for us and prove to ourselves, even in the face of real difficulties, the Auxiliary can and will do good work. The district chairmen are the strong link in the chain to the local Auxiliaries and I am asking that you give more than ever the splendid cooperation of your past efforts to me this year. I trust that I can attend your district meeting at least once."

Habersham County

Dr. and Mrs. C. T. Hardman were hosts to the Habersham County Medical Society and Auxiliary and friends recently at their home at Tugalo with an old fashioned barbecue. Cool breezes fanned the beautiful flowers that surrounded the well-kept lawn where the tables were loaded with the barbecue just taken from the pits. Dr. and Mrs. Hardman had arranged a delicious meal and each guest left declaring it the best barcebue yet. There were 60 guests present, including Dr. and Mrs. Earl Carter, Dr. E. H. Lamb and Dr. and Mrs. O. N. Harden from Cornelia.

Dr. and Mrs. J. B. Jackson entertained the Habersham County Medical Society and Auxiliary recently at their home in Clarkesville. Mrs. O. N. Harden gave the treasurer's report for the Auxiliary and it was announced that Mrs. D. H. Garrison was compiling a list of members for the State president. After the business session, the hostess assisted by her daughter, Mrs. L. C. Nicholson, and by her niece, Mrs. J. O. Lambert, of Atlanta, served a delicious luncheon.

Savannah Auxiliary

The Woman's Auxiliary to the Georgia Medical Society recently sponsored a delightful dance at the SSSS in Savannah for the enlisted men of the section. The rooms were decorated with red, white and blue bunting, flags and flowers. Mrs. Robert V. Martin was general chairman and members of her committee who served refreshments were Mesdames G. Hugo Johnson, A. A. Morrison, Jr., John Paul Jones, John G. Sharpley, T. A. Peterson and William R. Dancy. Mrs. William T. Knight is chairman of the hospitality committee at the center this month and Mrs. William McBride is co-chairman.

Randolph-Terrell

The Randolph-Terrell Auxiliary met with Mrs. J. C. Patterson at her home in Cuthbert recently. Mrs. T. F. Harper, the new president, discussed plans for the year, urging cooperation of all members. Routine reports were given and members voted to give 10 cents each to the Jane Todd Crawford Memorial Highway. Mrs. W. G. Elliott reported on the recent state convention at which the Auxiliary won the White award and stated that she, as health film chairman of Randolph-Terrell, had already shown 11 films to Negroes this year. Members were urged to secure new subscriptions to Hygeia, the national health magazine. Miss Willis, a trained nurse and special guest, spoke on women as pioneers and what their courage had meant to the world. Later Mrs. Patterson and Mrs. Elliott served refreshments.

Savannah Auxiliary

Mrs. Robert V. Martin, president of the Woman's Auxiliary to the Georgia Medical Society of Savannah, announces the following chairmen of committees: Mrs. T. A. Peterson, membership; Mrs. J. E. Porter, program; Mrs. S. F. Rosen, health; Mrs. A. A. Morrison, Jr., publicity; Mrs. W. R. Dancy, health films; Mrs. H. H. McGee, budget and finance; Mrs. L. W. Williams, Student Loan Fund; Mrs. H. M. Kandel, public relations; Mrs. Gregg Smith, hospitality; Mrs. E. C. Demmond, Hygeia; Mrs. L. M. Freedman, Doctors' Day; Mrs. J. K. Quattlebaum, research in romance of medicine; Mrs. Hugo Johnson, historian; Mrs. J. E. Porter, cancer. Mrs. J. C. Metts and Mrs. G. H. Lang were appointed members at large. Interesting

reports were given by Mrs. Charles Usher and Mrs. J. E. Porter of the recent state convention in Augusta at which Mrs. Lee Howard, of Savannah, state president, presided. W. B. Scott spoke briefly on the work of the USO and the campaign for funds. It was announced that $916.25 was taken in at the recent cancer drive by Mrs. T. A. Peterson, chairman of the drive.

Announcement was made that the mid-summer district meeting would be held at the Hotel DeSoto with Mrs. C. A. Henderson and Mrs. John Sharpley in charge of the luncheon. Mrs. J. E. Porter, cancer chairman, asked for assistants to work in the cancer clinic at the Health Center each Tuesday at 11 o'clock. Mrs. J. C. Metts and Mrs. Charles Usher served in June and Mrs. L. W. Shaw and Mrs. R. V. Martin in July.

Baldwin County

The Woman's Auxiliary to the Baldwin County Medical Society met recently with Mrs. L. A. Bailey and Mrs. Edward Small, co-hostesses at the former's home in Milledgeville. Mrs. Dawson Allen reported on the recent state convention held in Augusta. Resolutions were read on the death of a beloved charter member, Mrs. H. D. Allen, Sr. It was announced that the Baldwin Auxiliary won a prize of $3 for the best scrapbook exhibited at the convention, this having been compiled by Mrs. O. C. Wood. Mrs. George Echols had charge of the program, giving a sketch on the life of Jane Todd Crawford.

The resolutions on the passing of Mrs. Allen read as follows:

Whereas, It has pleased our Father in Heaven to call to her Heavenly Home, on May 26, 1942, our beloved friend, Sallie Cantey Allen, our organizer, and a most efficient member of the Woman's Auxiliary to the Baldwin County Medical Society;

Therefore, Be it resolved:

That, In her coronation the Auxiliary has lost a valuable member, and we a loyal and lovable friend.

That, We shall treasure with deepest appreciation her services intelligently and unselfishly given during her long useful life up to the last days she was here.

That, We shall always be inspired by her strength of character and her untiring devotion to promoting the best interests of the Auxiliary.

That, The whole community where she spent her life has lost a Christian leader, a joyous spirit, and an unfailing influence for right thinking and right living.

That, The Auxiliary extend to the bereaved family our love and sympathy.

That, These resolutions be spread upon the minutes of the Society; that a copy be sent to the family, a copy to the Union Recorder, and one to the State Publicity Chairman of the Medical Society.

Woman's Auxiliary to the Baldwin County Medical Society of Georgia.

Mrs. C. H. Richardson
Mrs. J. I. Garrard
Mrs. C. B. Fulghum

June 8, 1942.

Bulloch-Candler-Evans

The Bulloch-Candler-Evans Medical Auxiliary met in Metter recently at the Little Tea Room. After a joint supper with the members of the medical society, the Auxiliary members went to the home of Dr. and Mrs. J. L. Nevil for a program and business session. The president, Mrs. W. E. Floyd, of Statesboro, talked on Jane Todd Crawford. The next meeting will be held in Statesboro.

NEWS ITEMS

The Fulton County Medical Society met in the new Academy of Medicine, Atlanta, July 20. Titles of papers on the program were: *Surgical Diseases of the Colon Treated by Resection*, by Drs. Floyd W. McRae and Wm. E. Mitchell, Atlanta, discussed by Drs. Geo. F. Eubanks and Hulett H. Askew, Atlanta; *The Kenny Method of Treatment for Infantile Paralysis*, Dr. C. E. Irwin, Warm Springs Foundation. Contributors to the July 20 issue of *The Bulletin* were as follows: Dr. Don F. Cathcart, Dr. T. C. Davison, Dr. T. S. Claiborne.

The Sixth District Medical Society met at Dr. A. T. Coleman's Lodge near Dublin on June 25. Titles on the scientific program were: *Consideration of the Patient Who Needs Two Operations, One of Them Being a Thyroidectomy*, by Dr. Warren A. Coleman, Eastman; *Surgery in Syphilis of the Stomach*, Dr. Geo. W. Fuller, Atlanta; *Heart Disease in Pregnancy*, Dr. H. T. Harper, Augusta; *Official Remarks*, Dr. J. A. Redfearn, Albany, President of the Medical Association of Georgia. Dr. A. T. Coleman was host to the members at Coleman's Lodge, East Dublin.

Dr. W. H. Lewis, Rome, announced that the Floyd County Hospital and Medical Center had been opened to the public.

Dr. J. A. Redfearn, Albany, President of the Medical Association of Georgia, has been elected to the State Governorship of the American College of Chest Physicians for a term of three years.

Dr. Louis Holtz, formerly of Atlanta and East Point, moved to Carrollton and opened offices in the People's Bank Building.

Dr. M. L. Malloy, Vienna, has joined the staff of the R. J. Taylor Memorial Hospital at Hawkinsville.

Dr. Chas. S. Ward announces his association with Dr. Dan C. Elkin and Dr. J. D. Martin, Jr. Suite 618 Doctors Building, Atlanta.

Dr. Hal M. Davison, Dr. James C. Thoroughman and Dr. Harold Bowcock announce their association for the practice of medicine in Suite 207 Doctors Building, Atlanta. Their practice will be limited to internal medicine and allergy.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, August 3. Dr. Chas. E. Rushin read a paper entitled *Combination Operative and*

Injection Treatment of Varicose Veins, discussed by Dr. Jesse H. York and Dr. J. V. Warren. Dr. Wm. L. Dobes read a paper, *Contact Dermatitis*, discussed by Dr. Hal M. Davison and Dr. Herbert S. Alden. Articles published in the August 3 issue of *The Bulletin*: *Dr. Paullin Honored by Society*, Editor; *Dr. Paullin's Influence on Atlanta Medicine*, Dr. Major F. Fowler; *Dr. Paullin's Influence on Georgia Medicine*, Dr. Jas. A. Redfearn, President of the Medical Association of Georgia; *Dr. Paullin As A Teacher*, Dr. R. H. Oppenheimer, dean of Emory University School of Medicine; *Dr. Paullin's Influence in the College*, Dr. Glenville Giddings; *Dr. Paullin's Influence in American Medicine*, James S. McLester, Birmingham, Ala.; *Remarks*, Senator Walter F. George; *Remarks* by Dr. Irvin Abell, Louisville, Ky., Past President of the American Medical Association; *Dr. Paullin's Response*; *Doctors in the Civilian Defense Program*, Dr. D. Henry Poer. This issue of *The Bulletin* was dedicated to Dr. James Edgar Paullin.

The Bibb County Medical Society met on the roof of the Doctors Building, Macon, August 4. There was no scientific program. The meeting was entirely social.

Dr. Z. V. Johnston, Calhoun, Councilor of the Medical Association of Georgia, has been appointed local surgeon for the N. C. & St. L. Railway at Calhoun.

Dr. James E. Paullin, Atlanta, president-elect of the American Medical Association, lectured on *Syphilitic Aortitis* at the Glenn Building, Emory University, August 6.

The Ninety-Fourth Annual session of the Medical Association of Georgia will be held in Atlanta, May 11, 12, 13, 14, 1943.

OBITUARY

Dr. Lucius Lumar, Dawson; member; Emory University School of Medicine, Emory University, 1892; aged 71; died on June 9, 1942, after a short illness. He was born and reared in Terrell county and spent his life there with the exception of the time spent in the Medical Corps of the United tates Army during the First World War. Dr. Lamar served as a leader and steward in the Dawson Methodist church since 1899. He was one of the most devoted and loyal members. From the tracings of his career, it would seem that his life was spent to bestow charity in many ways to hundreds of people. Even the Lamar home was noted for its charity and never knew any bounds. Surviving him are his widow, one daughter, Mrs. J. V. Morrison, Atlanta; one son, Lucius Lamar, Jr., Fort Thomas, Kentucky. Rev. D. G. Mann officiated at the funeral services conducted at the Dawson Methodist church. The physicians of Terrell and surrounding counties formed an honorary escort.

Dr. Tanner Lowry, Cartersville; member; Atlanta College of Physicians and Surgeons, Atlanta, 1904; aged 62; died at his home on July 6, 1942, after a long illness. He attended the Rockmart Academy, at that time in charge of the late Lundy Harris, husband of Corra Harris. It was said that he left behind a life of usefulness and of great service to the people of his generation. No one was too poor to obtain the best of his services. He was affable and courteous to every one, and had many friends. Surviving him are three sisters, Misses Emmie, Annie Lou and Lorena Lowry; one brother, Robert Lowry, all of Euharlee. Rev. B. W. Hancock and Rev. Guy N. Atkinson officiated at the funeral services which were conducted at the Sam Jones Memorial Methodist church. Interment was in Oak Hill cemetery. Members of the Bartow County Medical Society were honorary pallbearers.

Dr. Boze B. Kitchens, Mitchell; University of Georgia School of Medicine, Augusta, 1884; aged 88; died in a hospital at Sandersville on June 27, 1942. He retired from active practice a few years ago after having practiced for more than fifty years. For many years he had an extensive practice in Glascock and adjoining counties. He was a prominent citizen and one of the leading families of the county. Surviving him are three sons, Claude Kitchens, Augusta; C. W. Kitchens, Laurens, S. C., and L. L. Kitchens, Decatur; three daughters, Mrs. N. S. Hodges, Mitchell; Mrs. O. L. Kelley, Mitchell; and Mrs. George Wynne, Lenoir, N C.. Rev. R. O. Edenfield officiated at the funeral services conducted at the Mitchell Baptist church. Burial was in Mitchell cemetery.

Dr. William E. Oliver, Cairo; University of Georgia School of Medicine, Augusta, 1902; aged 61; died on June 18, 1942, at his home of heart disease. He was a native of Randolph county. Dr. Oliver received his early education in the community where he was reared. Dr. Oliver was interested in live stock and devoted the greater portion of his time in later years to that business. Surviving him are one aunt, Mrs. Cora Hilsman, Cuthbert; two nephews, Wm. L. and J. L. Oliver, Cairo; and one sister-in-law, Mrs. D. F. Oliver, Cairo. Rev. W. E. McTier and Rev. T. F. Callaway officiated at the funeral services conducted in the home. Burial was in the Cairo cemetery.

Dr. Claude Bernard Hicks, Atlanta; University of Maryland School of Medicine, and College of Physicians and Surgeons, Baltimore, 1914; aged 57; died on June 24, 1942. He practiced medicine for a number of years then associated with pharmaceutical firms. Surviving him are his widow; one son, A. M. Hicks; six sisters, Mrs. J. A. Holloway, Mrs. W. H. Holloway, and Mrs. C. E. Phillips, all of Durham, N. C.; Mrs. C. A. Baldwin, Hampton, Va.; Mrs. Frank Culbreth, Fayetteville, N. C., and Mrs. H. S. Averitt; two brothers, Dr. C. S. Hicks, and J. T. Hicks, both of Durham, N. C. Rev. D. P. McGeachy officiated at the funeral services conducted at Spring Hill Chapel. Burial was in Durham (N. C.) cemetery.

Their findings in experimental investigations of the use of the sulfonamide drugs for intracranial (within the skull) infections constitute "a clear warning against the intracranial use of sulfathiazole," Cobb Pilcher, M.D.; Ralph Angelucci, M.D., and William F. Meacham, M.D., Nashville, Tenn., report in the July 18 issue of *The Journal of the American Medical Association.*

The development of conculsions in a very high percentage of their investigations following the implantation of sulfathiazole, the three physicians say, "prompts this preliminary report, as a warning against the clinical use of this drug in this manner. . . . Sulfanilamide and sulfadiazine do not appear to have the same irritating effects on the cerebral cortex, but until microscopic studies are completed no conclusion can be drawn in this regard."

BOOK REVIEWS

Let's Talk About Your Baby, by H. Kent Tenney, Jr., M.D., Associate Professor of Pediatrics, University of Wisconsin, with a foreword by Dr. Joseph Brennemann.

This is a small book of 109 pages, published by The University of Minnesota Press, Minneapolis, Minn., and selling for $1.00. It has to deal with the age-old problem of educating the mother about the care of her baby, and does it well. It is unique in its presentation of the subject, in that the author at times makes the newborn baby talk to him, and in this way attempts to get his viewpoint as well as the mother's and physician's viewpoint. This departure makes it very readable and serves to impress upon the reader the valuable information it contains. In addition to the valuable information it contains, the diction is good. As for example: "Your natural tendency will be to keep him too warm, so if you think he is freezing he is probably just right." Importance of medical supervision, immunizations, diets, etc., are given due consideration. Furniture, beds, bed clothing and other personal possessions are discussed. It is the best presentation of the subject with which I am familiar so far.

W. W. ANDERSON, M.D.

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MODERN METHODS OF IMMUNIZATION

Physicians who are concerned with the immunization of infants and children have as their goal the use of materials which will not sensitize the patient and the utilization of routes of administration that cause least discomfort. Definite assistance toward these objectives is provided by use of combined antigens in the opinion of a recent observer (J. Florida M. A., 28:330, 1942). The author has employed Combined Diphtheria Toxoid-Tetanus Toxoid, Alum Precipitated (Lilly) for the last three years without any untoward reactions.

The combination of diphtheria and tetanus toxoids is effected by mixing suitable amounts of the respective toxins which have been detoxified by the use of formaldehyde, and precipitating from this combination with alum the diphtheria and tetanus toxoids. The individual toxoids are tested for toxicity prior to mixing, and the combined alum precipitated toxoid is tested for toxicity after precipitation. Potency is determined by injecting guinea pigs with a human dose. After four weeks the blood serums of these animals must show at least 2 units of diphtheria antitoxin and 2 units of tetanus antitoxin per cubic centimeter of blood serum.

Should exposure to either diphtheria or tetanus occur before immunization against each disease is completed, the usual procedures for immediate protection of unimmunized subjects should be considered. The combined toxoid is not for treatment, it is a prophylactic measure of active immunization against diphtheria and tetanus.

ENROLMENT FOR SERVICE IN THE ARMY AND NAVY

Last month The Journal published an urgent request to all physicians of the United States to fill out the questionnaire published in that issue and mail it at once to Dr. Sam F. Seeley, Executive Officer of the Procurement and Assignment Service, Washington, D. C., indicating their availability to serve the nation in the present emergency. The response to this call to the medical profession to date has been highly gratifying. The following statement to that effect, with additional instructions, has been received from the Directing Board of the Procurement and Assignment Service:

The response of the physicians of the country to the Procurement and Assignment Service request for enrolment of those now ready for immediate service in the army or the navy is highly gratifying. All names are being processed, and those who meet the present demands of the Surgeon Generals will receive application forms and authority to appear for physical examination at an early date. All who are now ready for immediate duty should forward applications to the Procurement and Assignment Service at once. It is not the intention of the Procurement and Assignment Service to register every physician, dentitst and veterinarian at the present time. Only those available for immediate assignments should register at this time. The physical requirements of all military, governmental, industrial and civil agencies will be published in national and state journals immediately. On the basis of this information every

physician, dentist and veterinarian will be able to make a self appraisal of his physical qualifications. Within a few weeks the Procurement and Assignment Service will mail to all individuals a form on which they will be asked to state their preferences for assignment to all agencies of national defense which require medical, dental and veterinary personnel and for service in communities in public health and other civil categories. In this was every physician, dentist and veterinarian of the country will be able to lend maximum support to the national emergency. In order to meet the expanding needs of the military services, every physician immediately available for duty should mail his application blank to the Procurement and Assignment Service at once. All others will be given an opportunity to volunteer in the near future.

Frank H. Lahey, M.D., Chairman.
James E. Paullin, M.D.
Harvey B. Stone, M.D.
Harold S. Diehl, M.D.
C. Willard Camalier, D.D.S.
Sam F. Seeley, Major, M.C., U. S. Army, Executive Officer.

WAR MEETING IN RICHMOND 1942

Since the press release by the Defense Transportation Director in Washington in June, on the cancellation of all "non-essential" conventions, many inquiries have come into the Association's office upon the status of the Richmond plans for November.

The Association believes that the annual meeting of the Southern Medical Association is in no sense a non-essential convention. It should be of definite service to the Government and the people during the war. The comparable annual meeting twenty-five years ago was of service to the Government in World War I. There are many physicians in the South who will have to broaden their civilian practice next year, will have to do medical work that they have not done in years. In Richmond they will be furnished an opportunity to freshen up in expanded fields. and this will mean better service to the civilian population. Physicians in military service in this part of the country also will be able to discuss medical problems of the armed forces, which demand continuous study. The civilian population must replenish the military branches in any prolonged war, and must be kept in readiness for its duties.

The Association, through the member of its Council in the District of Columbia. Dr. Oscar B. Hunter, has been in contact with the Surgeons General of the Army, Navy, and Public Health Service in Washington, that is, Dr. James C. Magee, Dr. Ross T. McIntire and Dr. Thomas Parran. All three indicate that they believe that the Southern Medical Association meeting can make a very significant contribution to the war effort. Richmond has been described as a strategic location for this gathering. Just as the American Medical meeting in Atlantic City in June was helpful to military organization and current necessary medical progress, so the Southern Medical in Richmond in the fall will contribute to the national need. It is important that medicine not be frozen for the duration of the war. It is believed that the Richmond gathering has the endorsement of official medical Washington, and that no objection will be raised to it from any other quarter.

Section officers and all who are charged with program responsibilities are going ahead in the building of their programs. The activities this year will occupy three days instead of four, and will be confined to Tuesday, Wednesday, and Thursday, November 10, 11, and 12. Hotel reservations already made indicate that the attendance will be good. Hotel reservations should be made through the Hotel Committee, Southern Medical Association, 109 North Fifth Street, Richmond, Virginia.

EDITORIAL, "Southern Medical Journal," Journal of the Southern Medical Association, Birmingham, Alabama, volume 35, number 8 (August 1942), page 783.

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CANCER OF THE MOUTH

J. Elliott Scarborough, Jr., M.D.
Emory University

A general consideration of cancer of the mouth includes those lesions which involve the mucocutaneous portion of the lip, the buccal mucosa, the gums, the floor of the mouth, the tongue, and the hard and soft palates, as well as the lymph node metastases from these areas to the neck. Although the end results vary considerably in the different locations of the mouth, the diagnosis and treatment are sufficiently similar for all these areas to allow a general discussion of the subject.

Cancer of the mouth comprises about 5 per cent of all cancer. It usually occurs after the third decade, but may also be found in the second and third decades. It is more common in males than in females, the ratio being about seven to three.

It would seem that the accessibility of the mouth for examination would result in the early diagnosis of cancer in this location. On the contrary the great majority of mouth tumors are discovered in their advanced stages. Not only does the patient frequently examine his mouth before consulting a physician, but also it has become customary for the physician to look always at the mouth sufficiently in order to judge the condition of the coat of the tongue. Except for the fact that tumors of the mouth are frequently not painful, it would seem that the failure to make the diagnosis lies with the medical profession.

The etiology of cancer of the mouth is not known, but the causative factor of chronic irritation is nearly always present and associated with (1) oral sepsis, (2) syphilis, and (3) leukoplakia. The eradication of these factors would prevent the majority of mouth cancer. The responsibility, therefore, for the prevention of the disease lies almost entirely with the general practitioner who cares for the patient for the many years that are required for these chronic irritants to develop oral cancer.

Sharp teeth and poorly fitting dentures and oral sepsis can be eradicated. These are problems for the dentist, but it is the physician's responsibility to see that the patient consults the dentist. The control of the use of snuff and tobacco in the general population is just about as difficult as protecting farmers and sailors from the sun and wind. There is not quite agreement on the potency of tobacco as a carcinogenic agent, but the instance of mouth cancer in those using tobacco is higher than in those who do not.

The instance of syphilis in patients with cancer of the mouth has been reported to be as high as 35 per cent as compared to 5 per cent in the general population. Syphilis in the absence of a mouth tumor deserves thorough treatment, but the finding of a positive Wassermann with a mouth lesion means little, as far as the lesion is concerned. The important thing is to prove whether or not the lesion is due to cancer. Cancer can be ruled out only by repeated negative biopsies.

Leukoplakia is found in approximately 70 per cent of the patients with cancer of the mouth, and should be considered as a definite precancerous lesion. There are, of course, many cases of leukoplakia that never develop cancer. We feel that it is of such importance that every effort should be made to eradicate or control it. The treatment consists of both local and general treatment. Locally, the oral sepsis is cleared

Read before the Medical Association of Georgia, Macon, May 16, 1941.
From Robert Winship Clinic, Emory University School of Medicine, Emory University, Ga.

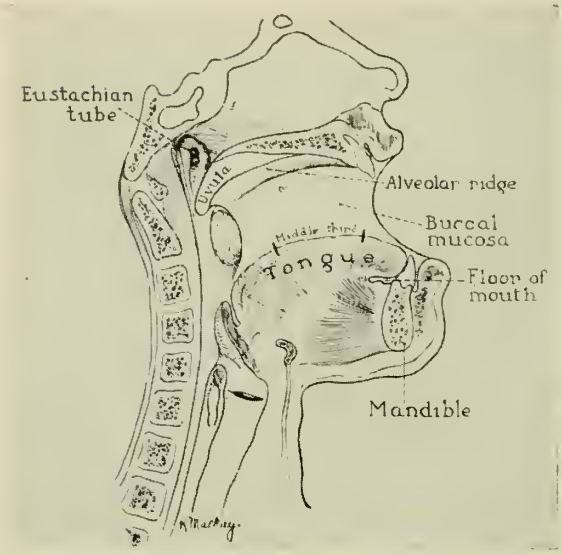


FIGURE I.
Diagrammatic sketch showing anatomy of mouth in sagittal section.

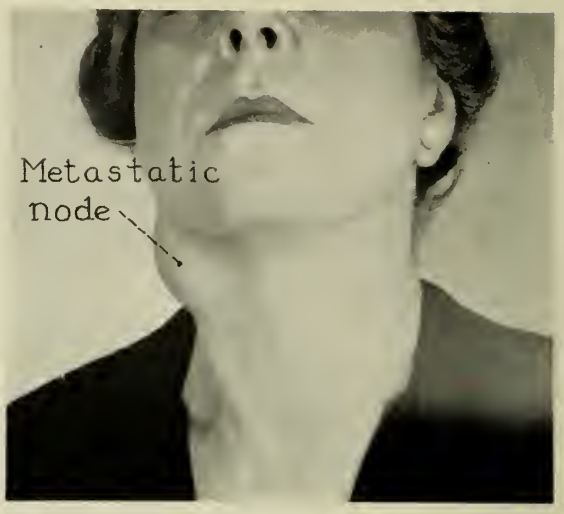


FIGURE III.
Enlarged neck node at bifurcation of carotid artery. Primary tumor found at base of tongue. No symptoms. Enlarged neck nodes in the adult usually represent metastatic cancer.

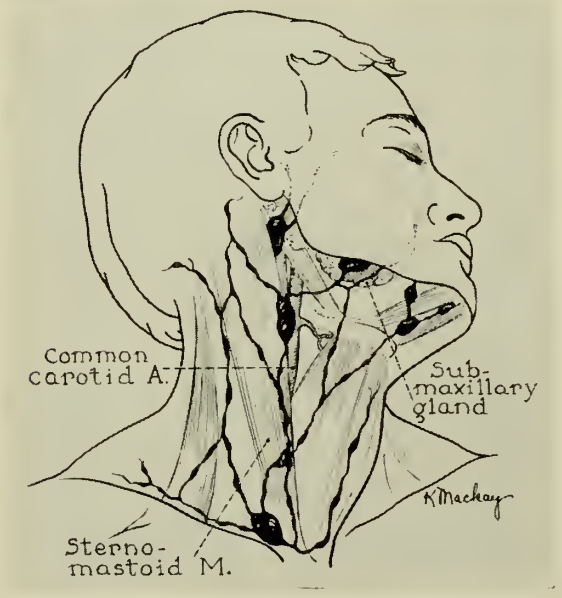


FIGURE II.
Lymph drainage of neck, showing commonly involved nodes by mouth cancer.

up, all irritants are eliminated, including tobacco if possible. Abstinence from tobacco for one month usually decides whether it is the offending agent or not. If the patient refuses to discontinue the use of tobacco, or the doctor considers it impracticable, he is asked to smoke as little as possible and rinse the mouth after each smoking. If the leukoplakia is well circumscribed and not too extensive, it is removed under local anesthesia by electrocoagulation or actual cautery. Treatment by x-ray and radium should be avoided. Patients with leukoplakia should be observed at regular intervals of three to six months, depending on the severity of the disease. The general treatment consists of saline therapy, during which time the patient is asked to take one to two teaspoonsful of a saturated solution of magnesium sulphate every morning to insure a soft to loose bowel movement daily. In the diffuse cases of leukoplakia large doses of the Vitamin B complex seem to have a definite beneficial effect in some cases. We have had no success with the use of estrogenic hormones as suggested by the work of Nathanson and Weisberger. The important thing in this condition is to continue to follow the patient at regular intervals, for we know that many cannot be cleared up and, therefore, run the risk of developing cancer.

The pathology of cancer of the mouth is fairly simple, since epidermoid carcinoma comprises about 90 per cent of these tumors. Occasionally adenocarcinomas arising from mucous glands occur on the base of the tongue. Those arising from aberrant salivary gland tissue are usually located at the junction of the hard and soft palates.

The patient's symptoms usually relate directly to the primary lesion. The most common complaint is that of a sore in the



(a)
Infiltrating, ulcerating, firm lesion in mucosa of cheek.



(b)
Palpable neck nodes in right submaxillary region. Biopsy at mucous membrane margin showing infiltrating squamous carcinoma.

mouth. It usually is not painful and is brought to the patient's mind by a feeling of roughness on the tongue, cheek, or elsewhere. Occasionally bleeding may be the first symptom associated with advanced disease. Rarely the patient notices a node in the neck without ever realizing that there is a tumor in the mouth.

Where there is doubt, biopsy usually decides the question. Biopsy in most cases is so easy that it should be practiced by all general practitioners. It can nearly always be done with local anesthesia in the office. It is necessary to get only two or three millimeters of tissue, place it in 10 per cent formalin, and give it to the pathologist.

Failure to find the tumor may be excusable, but treatment of the obvious tumor for some other condition such as syphilis or traumatic ulceration, is all too common and hard to excuse.

When the tumor is obvious and the examination adequate, the diagnosis is easy, provided we appreciate the fact that cancer is the most important lesion occurring in the mouth. If there is any doubt, it can always be proved by biopsy. On account of the numerous crevices in the oral cavity, these tumors are not always obvious, and are only discovered after a most careful and meticulous examination. The examination should be made not only with the help of a good light, but also by careful and gentle palpation.

The presenting symptom in some cases of cancer of the mouth is a neck node. If the node lies in the submaxilliary triangle, or at the bifurcation of the aorta, or anywhere else in the anterior triangle, careful and repeated examination of the mouth must be made in search of the primary tumor. Cervical adenopathy in the adult usually represents metastatic cancer, and this is most usually from the oral cavity. This statement does not hold true for children, but the condition occurs sufficiently in them to warrant careful examination of the mouth.

The differential diagnosis occasionally lies between syphilis, tuberculosis, herpes, and granulomas. Probably the most common differentiation must be made between ulcerated and fissured leukoplakia, but since this is a precancerous condition, the biopsy alone can differentiate.



(c)
Lead shield cut to protect normal tissue and lateral commissure of mouth.



(d)
Treatment by x-ray therapy through open mouth.

By far the most common serious error encountered is that of the cancer patient who has been treated for a syphilitic ulcer of the mouth for six months or more, with or without positive serologic tests. Syphilis may simulate cancer, but the ratio of cancer to gumma in the mouth is estimated to be one hundred to one. A therapeutic test by antileutic treatment should not be used over two weeks, and this is not justified in mouth cancer without first taking a biopsy. A positive serologic test does not prove the lesion syphilitic, but the positive biopsy proves it to be cancer.

Tuberculosis occurs rarely, but is soft and yellow and only superficially ulcerated. It is always associated with pulmonary tuberculosis, and the biopsy frequently shows typical giant cells.

Granulomas are usually caused by poorly fitting dentures. They are always softer and never as indurated as cancer, and by fitting the dentures in the patient's mouth, one can get an idea of their development. The biopsy proves the case.

Herpetic lesions sometimes appear within the mouth, but are usually associated with similar lesions along the distribution of the nerve on the lip or cheek. It is desirable not to take a biopsy on these conditions unless there is some doubt.

There are a few rarer diseases, such as actinomycosis and osteomyelitis on the gum, torus palatinus on the hard palate, fibromas on the tongue, and pipillomas of the lip and buccal mucosa, that should be considered in the differential diagnosis.

In the management of mouth cancer, there are three main considerations: (1) the hygiene of the oral cavity; (2) the primary tumor, and (3), the cervical metastases. The patient is first instructed concerning keeping the mouth clean. He is given a sheet of instructions which require him to obtain an irrigating can for the purpose of irrigating the mouth with warm salt and soda solutions several times daily. There is usually no difficulty encountered in getting the patient to follow these instructions, since the treatment usually gives the patient more relief from pain than even opiates. Regardless of whether the mouth looks clean or not, the lesion is sprayed daily with a power spray, using Dakin's solution followed by mineral oil.



(e)
1. Week after completion of x-ray therapy. 2. Removable radium needles inserted for 6 mc. destroyed or 800 mg. hrs.



(f)
Lead shield in dental compound mould protects gums from radium exposure.

The teeth nearly always constitute an individual problem in each case. For this reason, it is imperative that the surgeon and the dentist work in close cooperation. The patient is frequently sent to the dentist to have the teeth cleaned before treament is begun. There are often old, ragged teeth which should be removed, but this must not be done without thought, since it frequently carries with it the hazard of osteomyelitis or even direct local extension of the disease into the bone by way of the tooth socket. The patient is warned against ever having teeth pulled without the consent of his doctor.

In outlining treatment for the primary lesion, it is important for the surgeon definitely to commit himself as to whether the patient is being treated for palliation or for cure. If the patient is hopelessly incurable, one should not attempt to exceed the bounds of palliation, for one runs the risk of making the patient more miserable than before treatment without any real gain.

In the treatment of the primary lesions, irradiation is the method of choice in the majority of cases. Exception is found in those pedunculated tumors which occur on the lip, buccal mucosa, and anterior third of the tongue, as well as for those adenocarcinomas occurring on the roof of the mouth, which are excised by cautery after preoperative irradiation.

In other areas, surgery and cautery should be reserved for selected cases only, and should not be attempted unless one is reasonably sure of cure. The resulting scar formation, contraction, and deformity usually preclude any irradiation method in the event there is a recurrence of the primary tumor. Whenever possible, x-radiation applied through the mouth directly toward the tumor is preferable. Six or seven skin erythema doses can be given by this method, complemented with heavily filtered removable interstitial radium needles or gold seeds, to bring the total dosage up to ten or twelve skin erythema doses in thirty days. In some instances, where there is already trismus, or where for other reasons the tumor cannot be exposed for intra-oral x-radiation, surface applications of radium made of dental compound or wax are used. This treatment is also supported by interstitial radium.



(g)
Primary tumor seemed controllable after 4 weeks, therefore right upper neck dissection done, removing the submaxillary gland, cutting the facial artery and vein and sacrificing the platysma muscle. See cut node showing metastatic cancer.



(h)
Six months later buccal mucosa soft with no evidence of disease.

Metastases from mouth cancer constitute a separate problem from the primary tumor so far as the treatment is concerned. In the operable cases it is usually preferable to treat the metastatic node with preoperative external irradiation at the same time the primary is being treated, and as soon as possible a careful complete or partial neck dissection is done. If the node involves the periosteum of the mandible, this area is demarcated and excised from the mandible. If the medullary portion of the mandible is involved, an attempt should be made to remove the mandible, before the disease has extended as far forward as the mental foramen and midline. The chance for cure is low when the bone is involved except in lip cancer, where the results are sometimes surprising.

In patients who are not operable, and many of these are not, on account of their age, x-radiation supported by interstitial radium is preferable, either in the form of gold seeds or small radium needles. Neither prophylactic irradiation of neck nodes nor prophylactic neck dissection is practiced in our clinic.

The complications associated with cancer of the mouth and lip are numerous and important, accounting usually for the cause of death. The usual complications are: (1) local pain and neuralgia, (2) malnutrition and starvation, (3) osteomyelitis, (4) perforation of the cheek, (5) trismus, and (6) hemorrhage. Methods should be instituted from the beginning to anticipate these complications, and with constant care they can be avoided or ameliorated.

For the control of pain it is frequently necessary to resort to opiates. It is well to start with as small doses as will give relief, and discontinue as soon as possible, especially on account of its effect on the appetite. Codein sulphate grains ½ and aspirin grains 5 or 10 usually are sufficient, but if not, dilaudid in grains 1/48 or 1/32 by mouth should be tried before giving morphine. It is sometimes very helpful to block the second and third division of the fifth nerve with alcohol, for temporary relief.

Careful attention to the diet will prevent starvation and great loss of weight. The patient is given a high caloric liquid diet with multiple feedings. It is helpful to substitute lactose for sucrose for the carbohydrate, since it is better tolerated by the pa-

tient. Nasal tube feeding sometimes becomes necessary.

Osteomyelitis is unavoidable when the tumor involves the gum, but with the use of protective lead plates and dentures it may be prevented in treating tumors of the lip, tongue, and cheek. The condition of the teeth and health of the gums determine whether it occurs in a great many instances. Reference has already been made to the care of the teeth, and although there is no fixed method to follow, it is thought best to avoid extractions whenever possible. It is usually better to have the tooth cut off and the roots filled when heavy radiation or destructive surgery is to follow.

Perforation of the cheek is usually due to infiltration by disease with loss of substance after treatment, but it may also be due to interference with the blood supply, necrosis, and infection. It is desirable to close these areas with skin graft after healing is complete, and a reasonable chance for cure has been effected.

Trismus is due to involvement of the masseter muscle, either by disease or by fibrosis or spasm. Once the mouth becomes closed it is difficult to relieve sufficiently to properly deal with the tumor. Infection increases locally, and since the patient is unable to take food, his general condition becomes worse. The patient is urged to keep the mouth open by forced active motion, and if it becomes closed we have found the use of the hard rubber oral screw, used by the anesthetists, of great value.

Ligation of the external carotid artery or its branches on the affected side frequently is necessary in the large bulky advanced lesions. Because of great collateral circulation, it should be put off until bleeding is imminent. If hemorrhage has already occurred, pressure over the common carotid will control it until ligation can be carried out.

The prognosis in carcinoma of the mouth depends chiefly on the location and the clinical stage of the disease. The histologic grading has little influence, except that the higher grade tumors tend to metastasize earlier. Without treatment patients live from six months to three years with cancer of the mouth. The five-year salvage rate for all treated cases is approximately 70 per cent in lip cancer, 25 per cent in tongue cancer, and 35 per cent in cancer of the mucosa of the cheek.

In conclusion, I should like to re-state that the most important lesion occurring in the mouth is cancer, and the only way to rule it out is by repeated negative biopsies. A sore in the mouth should never be treated for syphilis or granuloma until cancer is ruled out. Any large lymph nodes in the neck usually represent cancer from the mouth in the adult, and a thorough search of the mouth should be carried out before ill-advised surgical removal or treatment by irradiation methods is instituted.

REFERENCES

1. Blair, Brown and Byars: Our Responsibility Toward Oral Cancer, Am. J. Surg. 106:568-576, 1937.
2. Duffy, J. J.: Cervical Lymph Nodes in Intra-oral Carcinoma, Am. J. Roentgenol. Vol. 39, No. 5, (May) 1938.
3. Friedell, H. L., and Rosenthal, L. M.: Etiologic Role of Chewing Tobacco in Cancer of the Mouth, J.A.M.A. 116: 2130-2135 (May 10) 1941.
4. Kennedy, R. H.: Epi. of the Lower Lip, Ann. Surg. 106: 577, 1937.
5. Nathanson, I. I., and Weisberger, D. B.: The Treatment of Leukoplakia Buccalis and Related Lesions with Estrogenic Hormone, New England J. Med. pp. 221-556, No. 15, (Oct. 12) 1939.
6. Martin, H. E., and Pfiuger, O. H.: Cancer of Cheek, Arch. of Surg. 30:371 (May) 1935.
7. Martin, H. E.: Treatment of Cancer of the Lip, 30:215 (Nov.) 1935.
8. Martin, H. E.; Munster, H., and Sugarbaker, E. D.: Cancer of the Tongue, Arch. Surg. 41:888 (Oct.) 1940.

JOSEPH JONES, SURGEON C. S. A.

Joseph Krafka, Jr., M.D.
Augusta

Medical history is something more than a series of biographic sketches extolling the particular genius, wit or social attainment of the country doctor. It is more than a pastime of the retired physician seeking an outlet in an old-age hobby. In its entirety it is a philosophy, based on the ethics of a profession; a record of the work of men to advance the knowledge of the art of healing.

Medical history has two phases: one, the present; the other, the past. In dealing with the period of the War Between the States I can only examine the records in retrospect, but the man about whom I will center

From the University of Georgia School of Medicine, Augusta.



Figure 1
Joseph Jones, Jr., M.D., 1833—1895.

this account made an effort to record history in the making. He saw in the great cataclysm an unusual opportunity to study disease in its most violent form. He recognized the social, economic and political factors that were pending. He premised the effect of poverty, unpreparedness and battle on the spread of disease. He realized that he could not hold back the tide of disaster, but he hoped to learn practical points that would be of value after the peace. He lost his battle to the overwhelming onslaught of fevers, just as his compatriots lost to an overwhelming horde of enemies. In this valiant fight he barely missed the niche of the truly great: he almost discovered the true cause of malaria; the real organism of typhoid, and the phenomenon of phagocytosis.

Joseph Jones was born in Liberty County Georgia on Sept. 6, 1833. His father was the Rev. Charles Colcock Jones, a famous minister and plantation owner at Montevideo on Colonel's Island. His great grandfather was Major John Jones, aide de camp of General Lachlan McIntosh of Revolutionary fame. His brother, C. C. Jones was one of Georgia's outstanding historians.[1]

Joseph Jones entered the University of South Carolina at the age of 13. He should not be considered precocious since many young men of that period undertook their training at this early age. He followed his graduation with a course of study at Princeton and received his M.A. in 1853. He continued his study of natural history under Joseph Leidy, being one of Leidy's private students. Two sessions at the University of Pennsylvania gave him a medical degree. His inaugural thesis was on "The physical, chemical and physiological investigations upon the vital phenomena, structure and offices of the solids and fluids of animals."[2]

This work was a remarkable performance for a young man of 23 years. It was published as a leading article of 50 pages in the most famous periodical of the day, the American Journal of Medical Science. In it Jones acknowledges his obligations to Dr. Samuel Jackson, Professor of Medicine at Pennsylvania, and to his source books such as Kölliker, Müller, Kirke and Paget, Virchow, Bernard, Berzelius and others. He accepts the theory of evolution and Jackson's views on Vital Force, citing Leidy's unsuccessful attempts to organize life from chemical constituents. He speaks of germs and their ability to grow. To all of the current biologic concepts he adds an immense amount of detailed information of his own on the evolution of the heart and blood, its histology and its chemistry, based on an extended series of experiments carried out on his father's plantation during his summer vacations.

A second paper appears in the same volume. It is entitled "Experimental investigations, instituted with a view to ascertaining the action of saline solutions of different densities upon living animals, and also the reciprocal action through dead animal membranes of serum, water and saline solutions." In this he reports 28 experiments. Tying off the stomach of the living cat, injecting with known quantities of magnesium sulphate, he compared the amounts absorbed by the living stomach with those from a removed stomach. His objective is clearly stated: "I hope at some future date to carry out the investigations

upon the action of all medicines; for I am convinced that is the only method by which the action of many medicines upon the animal economy can be accurately determined."[3]

In 1854 he had the high honor of presenting one of his papers before the Academy of Natural Science in Philadelphia.[4] The paper was published in the American Journal of Medical Science as "abstract of experiments upon the physical influence exerted by living organic and inorganic membranes upon chemical substances in solution, passing through them by endosmose." He had alternately placed a frog in solutions of calcium chlorate and ammonium oxalate for four hours; recovered the crystals in the blood and concluded that "the cell wall, like animal membranes, exert a physiological action upon the chemical substances held in solution passing through them."

In his paper on "Observations on the Kidney and Its Excretions in Different Animals,"[5] he considers the comparative anatomy of the kidney of the fish, reptiles, birds and mammals; he reviews the histology and embryology in theses classes; he gives the weights of the kidneys in many species and a chemical and microscopic examination of the urine. He illustrated the paper with 20 wood cuts—beautiful drawings of uric acid crystals and triple phosphates.

I have dwelt at length on these early papers. At the time they show nothing more than the interests and the energy of the man. They were important, however, as a preparation of the work that was to follow, for in all of Jones's studies on malaria, typhoid and yellow fever, he was not satisfied with the routine autopsy, but recorded complete chemical and microscopic findings in the blood and urine. He checked various current concepts of etiology in these diseases by the experimental technic of his younger days.

Jones began the private practice of medicine in Savannah at the age of 22. His ability was immediately recognized and he was in 1854 appointed to the chair of chemistry in the Savannah Medical College, where he became associated with Juriah Harris, a former student of Claude Bernard; and Richard Arnold, first secretary-treasurer of the American Medical Association. He immediately started an investigation of malaria in the Marine Hospital and Poor House.[6] In 1858 he was called to Athens as Professor of Natural Philosophy to fill the chair vacated by Joseph LeConte. The next year he accepted the position of Professor of Chemistry at the Medical College at Augusta, succeeding Alexander Means.[7]



Fig. 92. Leg of T. S. Cole, Private, third regiment, Georgia Reserve; guarding Federal prisoners at Andersonville, Georgia, September 22, 1864. While guarding the Stockade Hospital, gangrene attacked some abrasions of the skin on the right foot and leg. From Nature by Joseph Jones, M.D.—The New Orleans Lith. Co., 10 Union St.

Figure 2
Copy of original drawing and explanatory note by Dr. Joseph Jones as published in his writings.

Throughout this period he continued his investigations in natural history. He remarked that he had shot or captured and examined every known species of animal in Georgia. He sent specimens of the heart worm of the dog to his friend Joseph Leidy.[8] In 1859 he developed a theory of the origin of uric acid from muscle metabolism based on his observations on a pet snake.

At Augusta he found a ready medium for his writings. His first paper of 180

pages in the Southern Medical and Surgical Journal was a report of his study of malaria.[9] He reviewed the microscopic blood picture and gave complete chemical analyses of the blood and urine for 34 cases examined at Savannah, Athens and Augusta. In an account of 16 autopsies he described the microscopic findings in the brain, intestines, liver and spleen. He noted the association of high uric acid outputs and severity of malaria. He made glycogen and sugar tests of the liver in malaria and noted an absence of the latter substance, differentiating this disease from yellow fever. He kept accurate temperature charts on all malaria patients. He noted the tremendous destruction of red blood corpuscles in the disease by making comparisons of plasma and cells. He very accurately noted the pigment taken up by the white blood corpuscles and described them as "large cells, containing granules—thus resembling cancer cells; and also black masses composed of granules (probably altered colored corpuscles)."[10] These were concentrated in the liver and spleen but were also seen in the open circulation. While he realized that the principal side effect of the malaria was blood destruction, he sought a more direct toxic factor to account for the cerebral symptoms.

In 1860 his work was well under way. His lectures in the medical school included the therapeutic application of electricity with demonstrations by the static machine and the Leyden jar.[11] He demonstrated to his classes the effects of strychnine on dogs, chloroform on kittens and carbondioxide on birds.[12] He made a trip to his father's plantation in Liberty County for swamp water to inject into a dog to test the fever-producing qualities of the water. He did not inject into the blood stream because he felt that the organisms present would block the vessels and produce death without showing toxic influences. He was convinced that the water could produce both fever and diarrhea since both he and his man servant suffered severe attacks. He remarked that "if this report should accomplish no other result than the introduction of cisterns upon the rice plantations, I shall feel myself rewarded for my labor."[12]

In addition to his regular work at the medical school he gave private instruction in chemistry and microscopy. His advertisement stated that he had 1500 anatomic and microscopic preparations available. He doubtless used the six microscopes belonging to the college for this work.[13]

He also had under way a study on the analysis of the soils of Georgia for the Cotton Planters Convention, a work reported in a paper of 97 pages in 1860 and 1861.[14]

Then came the war. He was hesitant to enter the service under the State Surgeon, enlisting as a private in the cavalry. But he was soon called on as a surgeon to administer to the sick. In 1862 and 1863, in addition to his regular duties, he made a special study on malaria and typhoid and submitted his reports to the Surgeon General of the Confederate Army with a request that he be given a special commission which would allow him to inspect various army camps, hospitals and prisons for the express purpose of studying these and other diseases.

This assignment was made and during the next years he visited the hospitals in Richmond, Charlottesville, Staunton, Gordonville, Charleston, Atlanta, Savannah, Macon and Augusta, and the prisons at Belle Isle, Libby and Andersonville. The amount of clinical data collected and tabulated is really astounding. He stated that he lost 1500 pages of manuscript when the Yankees captured Richmond, but he kept his material in duplicate and was subsequently able to publish it in his memoirs.

A review of these memoirs shows that he had made drawings in 1862 of the liver cells of a Confederate soldier, dead of typhoid;[15] of Peyer's patches from sections taken at autopsy after typhoid in a Charleston case in 1863; of organisms seen in the intestine in typhoid; of casts in the urine, and of crystals of uric acid and phosphates in such cases. In volume II, page 161, of the memoirs published in 1887, he says: "a careful comparison of the preceding observations upon the micro-organisms of the intestinal content and the mesenteries

and Peyer's glands and the urine in typhoid, with the subsequent observations of Klebs and others, will justify the claim of the author as one of the discoverers of the micro-organisms of typhoid fever."

That Jones was a man of forethought is shown in his paper published in 1861 on "Indigenous remedies of the Southern States which may be employed in the treatment of malarial fever," "because of the necessity produced by the blockade and the employment of large armies in malarious areas necessitates large use of quinine."[16] He gave a detailed report on 36 species of plants including Georgia bark, dogwood, persimmon, Virginia snakeroot, black willow, thoroughwort, gentian, wild horehound, chestnut, alder, mullein, dogbane and turpentine. He reviewed the medical literature on the therapeutic value of each of these. That the problem was pressing is indicated in all of the literature of the time. The acting Surgeon General had purchased 4,000 ounces of quinine at the beginning of the war at $2.25 per ounce, and had told Eve that he knew where he could buy 4,000 ounces more at $2.50. This amount of course was a mere trifle as compared to the Federal stores eventually dispensed, which amounted to 595,544 ounces.

In 1864, Jones reported to Surgeon General S. P. Moore his extensive investigations on hospital gangrene.[17] "It is difficult to determine whether the fever was the resultant or the necessary accompanyment of the earlier changes in the wound."

"The Confederate troops have been so often exposed to malarious influences, that it is impossible to determine in most cases the cause and nature of the chill which sometimes precedes the fever."

"The question of the local or constitutional origin of hospital gangrene can be settled definitely only by an extensive and minutely recorded observations."

In this paper[18] Jones reviewed the various current theories such as that of a *local disease* communicated only by contact with animal matter in a certain state of change or decay; as a *constitutional disease* produced by previous exposure, bad diet, inhalation of air deprived of oxygen, or

The following illustrations should, therefore, be regarded as presenting the various bodies observed in the blood in various cases, and in various stages of malarial fever.



Engraving No. 46—Figures A and B, microscopical appearance of fresh blood of malarial fever. Blood spread in thin layers on glass-slide and examined under microscope. 1-10th of an inch objective. R. & J. Beck, London. Joseph Jones, M.D.



Engraving No. 47—Figure C, microscopical appearance of fresh blood of malarial fever. Blood spread upon glass-slide. 1-10th inch objective. R. & J. Beck, London. D, Micro-organisms in blood of malarial fever, prepared and stained after method of Koch. 1-10th inch objective. R. & J. Beck, London. Joseph Jones, M.D.

Figures 3 and 4
Copies of illustrations and footnotes as published in the writings of Joseph Jones, M.D.

loaded with sulphureted hydrogen or carbon dioxide; or by local electrical influences; or by the action of *specific poisons* which act in a manner similar to smallpox, measles or scarlet fever.

He favored the view that gangrene had both a local and a constitutional origin, since it "may arise in those exposed to the exhalations from gangrenous wounds without any abrasion on the surface."

He definitely discarded the germ theory of its origin. "After a careful examination of various vegetable and animal matters exposed to the atmosphere, under similar circumstances of temperature and moisture, I have come to the conclusion that in the present state of our knowledge we are unable to demonstrate that these animalcules

are in any way connected with the origin and spread of hospital gangrene."

"I have been unable to discover any form of animalcule peculiar to hospital gangrene. . . . As far as my observations extend they show that these animalcules will be generated with similar rapidity in urine containing albumen. . . . I have been unable to establish any relationship between the rapidity of spread of the disease and the number and character of the living organisms. . . . I have found them absent in the most extensive gangrene which has been excluded by the skin from the atmosphere."

"The result of these microscopical investigations clearly sustain the view that hospital gangrene is due to the action of resistant organic poison, which, after the manner of a ferment, is capable of inducing such decomposition in the tissue and in the blood, that all development of the cellular elements of the liquor sanguinous into cells, fibres or into pus, is arrested."

In this he was dominated by the current pathologic view that fibrin was produced as a reaction tending to block off the extension of infection. He made extensive quantitative estimates of the amount of fibrin in the blood, and found it wanting in gangrene. It is of interest to note that he considered pus in the wound a favorable sign.

He was cautious in obtaining specimens of blood for analysis: "It is manifestly improper to abstract blood by venesection simply for analysis, when the lancet wound would be liable to attach by the gangrenous inflammation and the life of the patient might be sacrificed."

"But above all, the character of hospital gangrene will depend upon the hygienic conditions of the hospital and the sanitary regulations. . . . I have seen nurses dress healthy granulating wound with the same filthy hands, sponges, and instruments which but a moment before had been busy cleaning and picking the most offensive gangrenous wounds."

He recognized that "bed sores are the cause of most tardy convalescences."

He noted that "hospital gangrene, almost unknown as an American disease previous to the present war, has, at least in the Confederate Army, progressively increased in amount and severity." He was confused by his observation that the disease may occur "in washerwomen, who did not enter the wards nor come in contact with the patients, but who simply washed the clothing and the rags soiled with the discharge. . . . The matter of this disease possesses contagious properties and will reproduce itself when inoculated upon healthy individuals."

He recommended in treatment an abundant supply of nutritious food; scrupulous cleanliness of wounds and bedclothing and free ventilation. He advocated that each man should be allowed 2,000 cubic feet of air space: "It is better to scatter men under trees than to crowd them into tents. hospitals and box cars." Wards were to be whitewashed and fumigated every two months. Since the inorganic acids were almost impossible to obtain, he recommended tar smoke as a fumigant. Wounds were to be washed freely with hypochloride of soda (Labarraques' solution) or with weak nitro-muriatic acid. Locally, he applied fuming nitric acid to gangrenous parts with the patient under ether or chloroform. He then cleaned the wound with water, muriatic acid, pyroligneous acid or tar water and tincture of bark. He covered the clean wound with flaxseed meal, yeast. hops, charcoal poultice, turpentine, camphor or tincture of iodine. He filled the cavities of the wounds with lint or cotton saturated with chloride of iron. He ruled out blood-letting and blistering. He remarked that other surgeons recommended cautery, sulphate of copper, nitrate of mercury, zinc chloride or nitrate of silver.

In retrospect, Jones seems to have been lost in the detail of his own information. He had to contend with the miasmatic theory, the zymotic theory, the electrical theory; the neural theory of Campbell on the ganglionic nature of periodic fevers and on his own chemical theories based on the action of drugs and snake poison. The limitation of the microscope to 250 diameters made a classification of the

animalcules seen impossible, and culture methods for organisms had as yet not been introduced. But Jones was not the only surgeon in the field who was confused. As a matter of record, Dr. J. K. Barnes, Surgeon General of the Union Army, in his Medical and Surgical History of the War of the Rebellion, written in 1870, refers to Jones' paper: "The necessity of a careful definition of such terms as mortification, gangrene, sphacelus, dry gangrene, moist gangrene, hospital gangrene, phagedeama, has become apparent for an examination of the report of gangrene recorded during the war."

Of the total number of cases of gangrene recorded by the Federal surgeons the chances were about 1 to 1 for recovery. The bromine treatment was the only new method introduced by the North and the records show that its results were no better than methods employed by Jones. Barnes says that the microscope shows nothing specific. Most of the cases of gangrene in the Federal Army occurred with Grant in Virginia, and with Sherman in Georgia. About 10 per cent of all cases of amputation became gangrenous.

Jones also made an attempt to determine the etiology of cerebrospinal fever and tetanus by an analysis of the statistics in field and hospital reports of the Confederate Army.[20] He concluded "that the phenomenon of traumatic tetanus . . . compared with the symptoms of poisoning by such powerful agents as strychnine, prussic acid, cyanide of potassium and Woorara, leads to the conclusion that this disease arises from the poison in the wounded surface and transmission to the nerves and the central ganglionic cells of the spinal axis, and that if the irritation be continued for a sufficient length of time, structural alteration of the spinal axis are established." He followed Todd in treatment "to reduce the polarity of the spinal cord" by the use of cold and chloroform. He discussed the arguments of Campbell and Michel on the differences between tetanus and tetanic spasm. He gave the fatalities in the Confederate armies. In a field force of 160,231 men, there were 17,300 deaths in the field and 17,059 in the hospitals.

One of Jones' more important contributions to military medicine was to call attention of the Confederate surgeons to the frequency of pneumonia in the Army. His original manuscript was captured at Richmond, but he published his report in the Southern Medical and Surgical Journal in 1866. He deals with the subject statistically, showing 28,273 cases in field reports and 15,542 cases in the hospital reports in an army of 160,231 men. He cites the records for Stonewall Jackson's command of 15,562 men, of whom 1,034 suffered from pneumonia.[21] This analysis is of particular interest since pneumonia is not mentioned in Gross's Military Surgery, reprinted for the benefit of Confederate surgeons by the editors of the Southern Medical and Surgical Journal in 1861.[22] Neither is pneumonia listed in Paul Eve's Health in Camp, published in the same volume.[23]

Pulmonary affections proved to be one of the major causes of death and of discharge in the Federal Army during the war; 79,192 cases with 8,072 deaths and 5,673 discharges.[24]

Jones in analyzing the statistics of the various Confederate hospitals and those of Europe considered the antiperiodic, the pholgistic and the supportive methods of treatment and advised against the use of blood-letting particularly in a malarious country.[25]

Jones' paper on "Researches on Spurious Vaccination in the Confederate Army during the recent Civil War, 1861-65" led him into considerable difficulty. His papers on Confederate Prisons were seized, on information of a doctor of the North who had been a guest in Jones' home, and used as evidence in the trial of Henry Wirz, Commandant of Andersonville Prison. Jones was accused of charlatanism. "Here came a medical officer of the highest rank in the rebel army and one of the most eminent savans of the South, to study the philosophy and physiology of starvation."[26]

Jones had inspected the prison at Andersonville in September, 1864. It was a stockade enclosing 27 acres with a hospital area

of 5 acres. It was traversed by a stream leading into a swamp. Jones, in his report did not hesitate to describe what he saw: "Standing as I did over these waters, in the middle of a hot day in September, as they rolled sluggishly forth from the stockade after receiving the filth and excrement of twenty thousand men, the stench was disgusting and overpowering; and if it is surpassed in unpleasantness by anything it is only in the disgusting appearance of the filthy, almost stagnant waters moving slowly between the stumps and roots and fallen trunks of trees and thick branches of reed, with innumerable longtailed large white maggots, swollen peas, and fermenting excrement and fragments of bread and meat."

And again, "there is one form of disease which is almost too horrible to witness, yet we cannot understand the wretchedness of the prison without looking upon it. . . . Here is a living being who has become so exhausted from exposure that he is unable to rise from the ground, suffering from diarrhea in its last form. He is covered with his own feces; the vermin crawl and riot upon his flesh, tumbling undisturbed into his eyes and ears and open mouth; the worms are feeding beneath his skin, burying themselves where his limbs, swollen with scurvy, have burst open into running sores. . . . His case has been presented to the surgeons, but they have pronounced him incurable, and he is left here in his misery, in which he will linger for three or four more days."

But Jones clearly pointed out that while the law gave the same rations to prisoners as were issued to the enlisted men, shortage of food was largely responsible for the prevailing conditions.[27] The prisoners had been removed to Georgia in 1864 "to secure a more abundant and easy supply of food" but the march through Georgia had made this impossible. By September the rations had been cut to one-third of a pound of bacon and one and one-quarter pounds of corn meal. The average number of prisoners in the stockade was 19,452. The cook house was unable to supply hot food and many of the men ate their rations raw. All of the small iron pans issued to the first contingent had disappeared and cooking over an open fire was practically impossible because of the shortage of fuel. Twenty men were assigned to winnow peas for 16,000 rations, an impossible task even when the vegetables were available. Jones stated clearly that "no person reared on white bread, if confined to the Confederate ration of unbolted corn meal and bacon, could retain his health and escape scurvy and diarrhea."[28]

There were recorded at Andersonville 16,772 cases of dysentery and 9,501 cases of scurvy. Jones wondered at the relative scarcity of typhoid and malaria, and raised the question as to whether the specific poisons were not neutralized by the terrible stench from the creek.[29]

Jones paid tribute to the courage and energy of the surgeons of the prison. The medical staff numbered from ten to fourteen, but at the time of Jones' inspection only one man, Dr. J. C. Bates, was able to perform his duty. In all, 11,086 prisoners died from scurvy, dysentery and exposure; sometimes at the rate of 100 per day. Jones made the charge that the real fault lay with the Federal Government in refusing an exchange of prisoners, "that the retention in captivity of Confederate prisoners was one of the most efficient causes of the final and complete overthrow of the Confederate Government."[30 31 32]

It should be noted here that 23,591 Confederate prisoners died in northern prison camps. The death rate at Danville was three times that at the Confederate Hospital Chimborazo in Richmond. Nor was the field army without its dysentery and scurvy. Dr. John Moore, Medical Director for the Department of Tennessee under Sherman, provided for a rolling hospital of 5,000 beds and all necessary stores for the march through Georgia. Yet records for one force of 18,409 men show 206 cases of scurvy, 7,975 cases of diarrhea and 2,010 cases of dysentery, in men living off the land.[32 33]

These facts were well known to the Northern surgeons and are a matter of record in the Medical and Surgical History of the War of the Rebellion. Hence the prosecution of the courtmartial of Henry Wirz

was based on the rumor that he had used poisonous vaccines to kill Federal prisoners. Jones was stout in his defense. He went into the history of vaccination, into the modification of the vesicle by fatigue and scurvy; into the appearance of spurious vaccination in the troops at the outbreak of the war; into Eve's statements that syphilis and erysipelas could be transmitted by vaccination. But his defense was of no avail: Wirz was hanged. And Jones was the object of professional outbursts of sarcasm for many years to follow.[30]

Laying aside this personal history for the moment, the question presents itself as to whether any great advance was made in surgery or medicine during the war. Random notes taken in reviewing the papers of Jones and the six volumes of the Medical and Surgical History of the War of the Rebellion show that little of practical importance resulted. "No injury of the abdomen occurred where it was thought necessary to apply sutures to the intestine after gunshot wound. . . . All wounds of the liver were followed by general peritonitis. . . . All wounds of the spleen proved fatal. . . . All wounds of the bladder were fatal."[33] [34]

J. K. Barnes, Surgeon General, U.S.A., refers to the fourteen numbers of the Confederate States' Medical and Surgical Journal and indicates that the general conclusions for the U.S.A. and the C.S.A. surgeons were the same. He states that about 80,000 cases of anesthesia were recorded, with 254 deaths from chloroform and 37 from ether.[34] He does cite a case of successful enteroraphy performed by Dr. Wm. H. Doughty, Assistant Surgeon, C.S.A., and a successful case of resection of the hip by Dr. J. B. Read of Savannah.[35] He also records a few cases of wounds of the large bowel that recovered with permanent fecal fistulae. Chest surgery, he says, has made a complete revolution, and men are no longer hesitant in opening the chest.

His reports also show that the Confederate troops and the Negro volunteer troops (629,354) had established no immunity to malaria. In the Northern troops there were 1,213,685 cases of malaria with 12,199 deaths in the white troops and 159,670 cases and 3,224 deaths among the colored. The Confederate malarial rate in the forces opposing the Army of the Potomac was 38 per 1,000 men as compared to 28 for the Federals.[36]

Thus the medical philosophy of practice, technic or sanitation was little changed during the war. The great advance came only with the valiant fight of the crazy Frenchmen set upon by the medical authorities of Paris, a fight in which the laboratory was to win against all constituted authority, experience and statistics. This fight was carried into the operating room by Lister, but the technic of antiseptic surgery did not come into general practice until 1880.

After the war, the Medical College at Augusta, disbanded in 1861, was reorganized and in 1866, 47 men were granted degrees.[37] Jones was appointed by the faculty to edit the Southern Medical and Surgical Journal and with his usual energy called upon the surgeons of the Confederacy to record their experiences since the war records were destroyed at Richmond.[38] But for some reason for which I can find no explanation, he resigned his professorship and in 1867 was appointed health officer to the city of Nashville, probably on the recommendation of his friend, Paul Eve. He also held the chair of Professor of Physiology and Pathology in the Medical School.[39]

But in 1869 he was appointed Professor of Chemistry in New Orleans where he continued his active study of fevers in Charity Hospital.[40] Here he married his second wife, the daughter of General Leonidas Polk, the fighting bishop of Louisiana.[1]

He prepared a voluminous report on yellow fever and submitted it to the convention of the American Medical Association in 1872, but Caspar Wistar moved it be returned to him with the request that it be abridged and presented at the next annual meeting.[41] This rebuff did not daunt his spirit, for in 1873 he injected the blood of a yellow fever patient into a number of puppies in an attempt to transmit the disease.[42]

We are apt to overlook the courage that such experimentation required. Jones was not immune to yellow fever at the time as shown by the fact that he contracted the disease in 1878; yet he did not hesitate to visit the sick and seek information that might lead to its control. It is of interest to note that he returned to Augusta during his illness to be under the care of his friends, Drs. L. D. Ford and L. A. Dugas.[43]

When he had recovered he returned to his work with the same eagerness that characterized his earlier endeavors. He kept well abreast of the times, and adapted Vierodt's new technic of blood counting to a more quantitative analysis of destruction of red cells in malaria.[44] He was called on as an expert witness in a murder trial to determine the nature of stains on the clothes of the suspect and with his usual positiveness did not hesitate to identify them as human blood.

In his memoirs, volume II, page 336, published in 1887,[45] he illustrates red blood corpuscles invaded by merozoites of malaria. He discusses the work of Laveran, Koch and Leidy. He writes: "The author demonstrated during the progress of his pathological research extending from 1856 to 1885, the power of the colorless corpuscles to feed upon and approximate the hemoglobin, hematin, and hemin of the colored corpuscles in the blood vessels of malarial patients, before physiologists had experimentally determined, by employing either finely divided fatty substance or coloring matter, the power of the colorless blood corpuscles of taking solid matter into their substance."

"We have thus traced the pigmentation of colorless corpuscles in malarial fever to (a) the destruction of the colored corpuscles by the mortific ferment, or microorganism of malarial fever; . . . (c) the invasion of the colorless corpuscles by the colored spores of the malarial bacillus."[46]

In none of his papers is it evident, however, that he actually identified the malarial organism before Laveran. He was familiar with crenation, rouleaux formation, anisocytosis and hemolysis and with phagocytosis. His microscopes included an R. & H. Beck of London, a G. & L. Merz, and a Nacket of Paris.[42] His case No. 852, Charity Hospital, Sept. 12, 1876, is of interest as being the nearest approach to a specific discovery.[45] Under the heading, "Examination of the blood," he writes:

"Many of the colorless corpuscles also contain numerous dark granules, as if they had fed upon the altered blood corpuscles and appropriated them." . . . (Here he closely approximates Metchnikoff's observations on phagocytosis made in 1884).

"Small, oval, colorless, vibratory and rotating particles were observed; the motion of these particles may have been nothing more than Brownian movement, but they resembled closely the smallest varieties of the rotatoria."

Unfortunately his account was not published until 1887 and hence priority is in question.

In volume II, page 193,[46] he writes again "Globular bodies—found not only in the liquor sanguinis, but also in the colored corpuscles, and in the colorless corpuscles. These bodies, most probably true spores, appear to possess the power of invading and destroying the colored corpuscles."

He claims for himself "priority in the determination of the chemical and the microscopical character and changes in the blood in the various forms of malarial paroxysmal fever."

Jones' last great effort was productive of very positive results.[47] As president of the Louisiana Board of Health from 1880 to 1884, he made an outstanding contribution to American medicine. His staff inspected 4,436 vessels, 479 of which had embarked from yellow fever ports. By his extreme energy he showed that yellow fever was not endemic in New Orleans and that quarantine measures could keep any port clear of the disease. He had to defend this principle in the courts of Louisiana against the opposition of the Morgan interests represented by the Louisiana and Texas Railroad and the Gulfport Shipping Company, who claimed that quarantine was a violation in restraint of trade. The case was finally brought before the United States Supreme Court and he won his great de-

cision, important to all future public health regulation.

Unfortunately, Jones' memoirs are not well organized. To the historian as well as to his contemporaries it is difficult to isolate important facts from a mass of detail: "No one can, with justice, accuse Professor Jones of haste, or of too great a brevity; but on the other hand, a charge of prolixity might, we fear, be maintained with some show of reason" so wrote Dr. John Ashhurst in the American Journal of Medical Science in 1871.[48] The four volumes, however, if carefully reviewed, constitute a personal account of the development of medical practice during the most trying period of man's experience; a record of history in the making.

BIBLIOGRAPHY

1. Watson, I. A.: Physicians and Surgeons of America. Republican Press, Concord, 1896.
2. Am. J. M. Sc. 32:13, 1856.
3. Am. J. M. Sc. 31:61, 1856.
4. Am. J. M. Sc. 29:295, 1855.
5. Am. J. M. Sc. 29:555, 1855.
6. Memoirs of Joseph Jones, four volumes, New Orleans.
7. Minutes of the Faculty, Georgia Medical College, Augusta, 1859.
8. Memoirs of Joseph Jones, 2: 1311.
9. South. Med. & Surg. 15:122, 1859.
10. South. Med. & Surg. 14:738, 1858.
11. South. Med. & Surg. 16:311, 1860.
12. Memoirs of Joseph Jones, 1:71—1,497; 2:1114
13. South. Med. & Surg. 16:320, 1860.
14. South. Med. & Surg. 16:721, 1860; 17:1, 1861.
15. Memoirs of Joseph Jones, 2:161-195.
16. South. Med. & Surg. 17:128, 1861; Memoirs 2:991.
17. South. Med. & Surg. 21:55, 1867.
18. Memoirs of Joseph Jones, 3:387.
19. Medical and Surgical History of the War of the Rebellion, J. K. Barnes; Surgeon Gen., U.S.A., Washington, 1870.
20. Memoirs of Joseph Jones, 1:411, 1876.
21. South. Med. & Surg. 21:126, 1866.
22. South. Med. & Surg. 17:592, 1861.
23. South. Med. & Surg. 17:586, 1861.
24. Medical and Surgical History of the War of the Rebellion.
25. South. Med. & Surg. 21:126, 1866.
26. Memoirs of Joseph Jones, 3:400, 1887.
27. Memoirs of Joseph Jones, 3:398, 1887.
28. Memoirs of Joseph Jones, 3:391, 1887.
29. Medical and Surgical History of the War of the Rebellion, Surg. vol., 3:824, 1888.
30. Medical and Surgical History of the War of the Rebellion, med. vol., 3:109, 1888.
31. Medical and Surgical History of the War of the Rebellion, med. vol., 1:302, 1888.
32. Memoirs of Joseph Jones, 3:391-410.
33. South. Med. & Surg. 20:110, 1866.
34. Medical and Surgical History of the War of the Rebellion surg. vol., 3:424.
35. Medical and Surgical History of the War of the Rebellion, surg. vol., 2:62.
36. Medical and Surgical History of the War of the Rebellion, med. vol., 1:39, 1870.
37. South. Med. & Surg. 21:164, 1867.
38. Faculty Minutes, Georgia Med. College, 1866.
39. Memoirs of Joseph Jones, 3:139.
40. Memoirs of Joseph Jones, 2:356, 1876.
41. Tr. A. M. A.
42. Memoirs of Joseph Jones, 4:356.
43. Memoirs of Joseph Jones, 2:1111, 1876.
44. Memoirs of Joseph Jones, 4:422.
45. Memoirs of Joseph Jones, 2:336.
46. Memoirs of Joseph Jones, 2:193, 1887.
47. Watson, I. A.: Physicians and Surgeons of America, Republican Press, Concord, 1896.
48. Am. J. M. Sc. 62:456, 1871.

THE TRAUMATIC ABDOMEN

Special Reference to Non-Penetrating Injuries

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In our various capacities as practitioners and surgeons it will not be amiss for us to review some of the outstanding points in abdominal injuries. It is well to keep certain facts before us as there may be added to the already increasing civilian possibilities war injuries.

Increasingly high rates of speed is the main contributing factor to the growing number of accidents. The severity of the accident is usually commensurate with the greater rate of speed. Man's upright position and his thin-walled abdomen make abdominal injuries hazardous. The lower margins of the ribs afford some protection to the underlying structures.

Classification of Injuries of Abdomen

A. Injuries to the abdominal wall alone.
B. Penetrating injuries.
C. Non-penetrating injuries.

This subject is entirely too large in its scope to be covered in a short time, so I have chosen the last phase for our consideration: that is, non-penetrating injuries of the abdomen.

First aid in these cases is exceedingly important. Irreparable damage can be done the patient who is handled roughly and too much. Every effort should be made to have him placed in a hospital, if for no other reason than for observation. Some seemingly trivial injuries turn out to be of a serious nature. Regardless of treatment, the outcome in a massive injury is quite obvious. Place the patient in a flattened position with the head lowered. Maintain body heat with external heating apparatus, taking care not to burn the patient whose senses may be dulled or even lost temporarily. Sedatives or stimulants are given after the physician is summoned and has made a preliminary examination. While still in the flattened position, the patient is carefully moved to the ambulance. Injured people have been greatly harmed when bundled up and crudely placed on the rear seat of an automobile in order to get them to the hospital speedily. If possible, it is better to render first aid and wait for the ambulance. So often there are injuries concomitant with abdominal injuries which add to the gravity of the situation and

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these must be taken into consideration.

The question of distinguishing between shock and hemorrhage is, at times, very difficult. It is equally important as hemorrhage is elusive. Often the end results will depend on the differentiation of these two conditions. Bailey has the following to say about this:

"1. Is hemorrhage progressive?

"2. Does the degree of shock forbid operation?

"3. If bleeding is controlled, may one hope, by rapid anti-shock treatment before and during entrance, to check hemorrhage, remove the cause and maintain physiologic coherence; or will it be a safer procedure to initiate stabilizing therapy, under constant observation, anticipating spontaneous arrest of the hemorrhage? Herein lies the crucial test of surgical judgment."

Constant and competent supervision of these patients by a conscientious intern will be a great aid in diagnosing the actual condition of the patient. Bedside x-ray examinations to determine the presence or absence of air in the peritoneal cavity and bone injuries are far better than too many trips to the x-ray room which may be some distance from the patient's room. Lowered head, external body heat, repeated physical examinations, blood pressure readings, urine tests for blood, white and red blood cell counts, hemoglobin determinations and, if apparatus is available, specific gravity of the blood and plasma and blood cell concentration are all necessary for the best work for the patient.

Patients in primary shock will present, suddenly, a picture of pallor, diaphoresis, lowered blood pressure and falling pulse rate, followed by thready pulse. In cases not complicated by hemorrhage, these symptoms will disappear. If hemorrhage is present they will reappear as secondary shock, which will usually be more severe than the primary shock. Massive hemorrhage will present a picture of profound shock which grows steadily worse in spite of heroic anti-shock treatment. Increasing pulse rate, increasing pallor, air hunger, restlessness, increasing white cell count, falling hemoglobin index and, later, falling blood pressure, indicate hemorrhage. In shock there is a gradual rise in the specific gravity of the blood (peripheral), increased cell volume (by hematocrit test) and an increase in plasma volume, whereas in hemorrhage there is a drop in the specific gravity of the blood and drop in the cell volume. These blood changes come before any change in pulse rate or blood pressure. Fatal return of hemorrhage may be induced by overtreatment, especially if too much fluid is given intravenously. Progressive hemorrhage, even in shock, must be controlled. While operating give blood, plasma or glucose in saline solution. Scudder suggests 300 cc. of blood and then 300 cc. of saline. He indicates the importance of maintaining the blood balance. Saline solutions will help maintain the electrolyte balance.

A valuable aid in determining the nature and extent of the injury will be a carefully taken history, especially as to the direction, force and manner of the blow. A diffuse blow will, more likely, rupture the liver or spleen, while a circumscribed blow will injure the intestine, mesentery or bladder. The stage of digestion is important as an intestinal tract which is empty is not as likely to be ruptured as one that is filled. A longitudinal tear in the intestinal tract may come from an overdistended gut. Mesenteric and retroperitoneal tears are fairly common and are usually associated with an injury to some viscera. Any abdominal organ is liable to be injured and their order of frequency is: liver, kidney, intestine, spleen, urinary bladder and the rarer ones such as the stomach, pancreas and common bile duct.

The liver is most frequently injured due to its size, limited range of motility and softness of the pulp. A fall from a height, striking on the feet, may cause a rupture in the liver and, also, squeezing trauma applied over a large surface. Symptoms of internal hemorrhage, localized tenderness, shallow respiration, elevated right diaphragm and rigidity in the upper right quadrant suggest an injured liver. The capsule is torn with the rupture extending into the parenchyma. These ruptures may be multiple and when extensive are usually fatal. The treatment consists of packing and suturing. One writer suggests suturing the liver to the abdominal wall. Hepatic and portal vessels may be compressed with the finger inserted into the foramen of Winslow. Transfusion before, during and after operation is necessary. The mortality rate is about 50 per cent.

The spleen is the most friable organ in the body and has a very thin capsule. If there is a rupture in the splenic pulp with a tear into the pedicle, shock is severe and immediate operation is necessary. In the ordinary case there is primary shock, vomiting, pain in the upper left quadrant, rigidity of the abdominal wall, dullness in the left iliac fossa, pain in the left shoulder and tenderness in the left side of the neck. These symptoms may subside only to return in from one to ten days. Immediate operation is now imperative and should be preceded by transfusion. Pendergrass gives a Seidlitz powder and then x-rays the stomach to see if there is a deformity of the fundus which may be due to the presence of an enlarged spleen.

Splenectomy is practically always done because it is about as easy to remove the spleen as it is to try to suture it. Since the spleen is not a vital organ and may be removed without any untoward effects, splenectomy is the operation of choice. Blood loss must be replaced. Autotransfusion of the blood taken from the abdominal cavity has been suggested but one

must be certain that there has been no contamination from other injuries as may come from a perforated intestine or one that has been crushed. The mortality rate is about 25 per cent.

Injuries of the kidney vary from a small subcapsular hematoma to extensive lacerations with rupture of the renal vessels and massive hemorrhage. Injury to the ureter and pelvis may cause extravasation of urine. History of back injury, localized tenderness with muscle spasm over the affected lumbar region and hematuria will suffice to make a diagnosis. Clots which pass down the ureter may cause colicky pain similar to stone pain. If injury is severe there will be shock. Intravenous pyelography is safe and may aid in establishing a diagnosis of kidney injury.

Most of these patients can be treated conservatively. In cases of persistent hemorrhage operation is necessary. Suture of the rupture or nephrectomy may be necessary.

Of the entire intestinal tract, the small intestine is most likely to be injured and this is usually due to compression against the vertebral column. Injuries occur more often in the upper jejunum and terminal ileum. Of the large intestine the sigmoid is most commonly affected. Rupture of the stomach is very rare.

It is important to keep in mind the possibility of injury to an intestine in any abdominal injury regardless of how trivial the injury may seem. This is, at times, difficult to impress on the patient who may insist on walking about. There is more often severe, continuous pain, repeated vomiting, general or localized board-like rigidity, and later distention with signs of spreading peritonitis. X-ray examination should be made to determine the presence or absence of air in the peritoneal cavity. Shock should be treated early and exploration done when injury to the intestinal tract is suspected. Lacerations should be sutured, preferably transversely. Extensive wounds may require resection, especially if there is injury to the mesenteric blood supply. Injury to the large intestine may call for a colostomy. The sulfa drugs are a great help in combating infection and peritonitis. Sulfanilamide can be given in saline as a hyperdermoclysis if it cannot be given by mouth. The mortality rate in these cases is about 65 per cent, due largely to peritonitis, multiple lacerations, extensive hemorrhage and delayed operation.

Cases of traumatic duodenal and gastric ulcer have been reported in the literature of recent years. Most of these cases are from European countries and while some of them do not prove conclusively that the ulcer is due to injury, there are a few which will bear careful study. Crohn and Gerendasy have reported one such case in the American literature. Eusterman of the Mayo Clinic adds another and Gray reports five. These seem to be proven cases. From a medicolegal point, it seems to me that this possibility is well worth remembering. These ulcers seem to occur more frequently in the stomach than in the duodenum.

The urinary bladder is frequently ruptured in an injury that fractures the pelvis. It may be ruptured by a crushing blow over the lower abdomen or a direct blow over a distended bladder. The history of this type of injury is helpful in arriving at a diagnosis. Shock may be trivial and even appear late. Rigidity, pain and tenderness over the lower abdomen and blood in the urine are diagnostic evidences. These patients void small amounts of urine and in some cases will void none. Cystogram of air or sodium iodide will clarify the diagnosis.

The tear should be sutured and some form of constant drainage instituted. Sulfa drugs are indicated. The mortality rate is about 15 per cent, which is largely due to associated injuries.

It behooves us to be alert and study these cases carefully. It requires keen observation, precise and repeated examinations and, finally, mature surgical judgment to answer the question of whether to resort to surgery or not; one writer has aptly said that it requires the eye of an eagle and the touch of a woman. There will be times, in those cases which present a confusing picture, when it will be a point of wisdom to do an exploratory laparotomy. Let us be vigilant in our efforts to reduce the excessive mortality rate in these cases, which are very serious and are undoubtedly on the increase. Let us say with Bennett:

'Tis better to use the knife too soon
And find our diagnosis wrong,
Than to hear that old familiar tune
He's gone to join the heavenly throng.

BIBLIOGRAPHY

1. Gillete, N. W.: Diagnosis and Surgery of the Traumatic Abdomen, West Virginia M. J. 35:349 (Aug.) 1939.
2. Malone, B. H: Non-penetrating Abdominal Injuries, Memphis M. J. (Aug.) 1940.
3. Kaufman, L. R.: Surgical Aspects of Pain in the Abdomen in Relation to Claims for Compensation, Arch. Surg. 43:1086 (Dec.) 1941.
4. Crohn, B. B., and Gerendasy, Julius: Traumatic Ulcer of the Stomach and Duodenum, J.A.M.A. 100:1653 (May 27) 1933.
5. Shipley, A. M., and Hamrick, J. C.: Abdominal Catastrophes Resulting from External Violence, Am. J. Surg. 42:542 (Dec) 1938.
6. Estes, W. L., Jr.: Non-penetrating Trauma of the Abdomen, South. Surgeon 10:427 (June) 1941.
7. Lewis, Dean, and Trimble, I. R.: Subcutaneous Injuries of the Abdomen. Ann. Surg. 98:685 (Oct.) 1933.
8. Duncan, J., and Forbes, R. D.: Non-penetrating Abdominal Injuries, Northwest Med. 37:172 (June) 1938.
9. Levering, J. W.: First Aid in Treatment of Abdominal Injuries, Surg. Clin. N. Am. (Dec.) 1939.
10. Bailey, F. W.: Non-penetrating Intraabdominal Injury, Ann. Surg. 109:931 (June) 1939.
11. Bancroft, F. W.: The Traumatic Abdomen, Indiana J. Med. 9:285 (June) 1940.
12. Eusterman, G. F., and Mayo, Chas.: Traumatic Peptic Ulcer, Am. J. Surg. 26:74 (Oct.) 1934.
13. Gray, Irving: External Trauma in Relation to Ulcer of the Stomach and Duodenum. Ann. Int. Med. 7:1403 (May) 1934.

TUBERCULOSIS IN GENERAL AND EXCERPTS FROM THE 1941 ANNUAL REPORT OF THE DIVISION OF TUBERCULOSIS CONTROL

GEORGIA DEPARTMENT OF PUBLIC HEALTH

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Atlanta

The year 1941 was marked by another spectacular decrease in number of deaths from tuberculosis and in death rate. Only 1,385 deaths were reported and the new rate is 44.0 per 100,000 population. This is a 10.4 per cent drop. A comparison of 1940 and 1941 figures is shown below:

	White		*Colored*		*Total*	*Rate per 100,000 Population*		
	No.	*%*	*No.*	*%*	*W. & C.*	*White*	*Colored*	*W. & C. Combined*
1940	544	35	989	65	1,533	26.7	91.2	49.1
1941	501	35	884	65	1,385	24.3	81.3	44.0

In the 1940 annual report it was shown that in three years, 1930-1932, the average number of deaths was 2,091 per year. This was a period when case finding was being developed. In 1933-1936, a four year period, the average number of deaths per year was 1,748 and during this period artificial pneumothorax was largely developed in sanatoriums, and refill service through practicing physicians throughout the State. In 1937-1940, a four year period, the average of deaths annually numbered 1,552. During this time surgical service at Alto was greatly increased, extra-sanatorium artificial pneumothorax refill service was greatly increased, as were case-finding, relief and rehabilitation measures. It is hoped that the 1941 decrease of deaths marks the beginning of another period of lower death rate and that it may be kept low during the trying times to come. Since 1930 the State rate has been decreased from 74.6 to 44.0 per 100,000 population, or 41 per cent.

Generally speaking, the decrease in tuberculosis death rates in Georgia is nearly that of the United States, although the mortality level is a little higher in Georgia. The rate for the United States in 1940 was 45.8; Georgia's was 49.1. It is still a devastating disease and according to available reports kills more people than any other reportable infectious disease, with the exception of pneumonia. More than 5,000 deaths from tuberculosis are reported each month.

A much larger service was performed by the Division of Tuberculosis Control in 1941 than in any preceding year: 240 field clinics were held in which 16,266 x-ray examinations were made, resulting in the discovery of 624 new cases of tuberculosis, 381 white and 243 colored; 208 x-rays were made in the central office in which 14 cases of tuberculosis were found; 534 consultation films were sent in by physicians from all over the State and 54 cases were diagnosed through this means. Altogether this Division participated in the diagnosis of 692 cases of tuberculosis.

The State Health Department Pneumothorax Refill Program, begun in 1940, is being continued and an average of 396 patients per month were treated. In 1941, 7,174 artificial pneumothorax refills were given, 264 aspirations, 249 special fluoroscopic examinations and 211 x-rays, all performed by the 66 participating physicians. The cost per person was less than forty dollars annually. The number of cases treated during the year was 493, and 409 were on the list on Dec. 31, 1941. Only 13 patients of the 493 died during the year, an excellent record.

Two hundred twelve additional beds were placed in operation at the State Tuberculosis Sanatorium and they have been valuable in permitting undelayed admission of urgent surgical cases and serious public health problem cases. Six hundred twenty beds are in operation at the time—494 for white patients and 126 for Negroes. Unfortunately, there remains a paucity of beds for Negroes, which hinders us greatly in our efforts in the control of tuberculosis. Effort should be made to overcome this deficiency. There is pressing need of institutional beds for the care of chronic tuberculosis and for indefinite bed care treatment of other cases, both of which are impossible for a large number of patients, both white and colored, with our present sanatorium facilities. No particular plan of providing such facilities is presented except it is suggested that a program of PARTICIPATION BY THE STATE IN THE MAINTENANCE OF INSTITUTIONS, OR HOSPITALS, OR SANATORIUMS which may be constructed by local governments be seriously considered. Such a measure could go far in relieving Alto of the need for providing domiciliary beds, which it now does to an inadequate extent, and permit it to use part of its beds for the surgical care of Negro patients. At present not many Negroes can be admitted soon enough after application is made to be benefited.

It is believed that the responsibility for the control of tuberculosis is being recognized more and more as a community problem to be supplemented by whatever governmental assistance may be obtained. The assistance particularly required is that for maintenance of whatever

tuberculosis hospital or sanatorium facilities communities may provide.

The Georgia Tuberculosis Association is making a very determined effort to assist in the rehabilitation of patients and their families in every possible way. It is not possible to include at this time a report of the accomplishments of this Association, but it may be said that it is growing and has answered appeals in every case brought to its attention.

Cases of tuberculosis reported in Georgia have decreased from 3,647 in 1934 to 2,635 in 1941, which is a decrease in rate per 100,000 population from 121.3 in 1934 to 83.8 in 1941.

Cases of tuberculosis reported in the State show a decline, but nearly come up to the minimum standard requirement of two new cases per each annual death. The reduction of cases reported indicates that there is with the decrease in deaths a comparable drop in the development of new cases. As case-finding is not fully developed, the number of cases reported may be expected to increase as it is improved. Case-finding by this Division shows little change in the percentage of cases found in persons examined. It is a service limited to selected material, which accounts for this fact.

In order to reach an immensely greater part of the general population much more cheaply than has heretofore been possible, it is urged that by some means 35 mm. fluorophotographic apparatus should be installed in the larger population centers for continuous use. Should such apparatus be installed this division might assist as follows:

1. Lend advisory aid to local agencies in organizing the service.
2. Teach rapid x-ray technic to local health or other personnel.
3. Assist and teach otherwise qualified physicians in miniature x-ray film interpretation as related to screening for determining what persons need conventional x-ray study.
4. Make interpretation of miniature and conventional x-ray pictures as the capacity of the Division may permit.

The Director of this division personally has made an extended study of 35 mm. photo-fluorographic technic and agrees with others who have made similar studies that in mass survey work or case-finding it is a very cheap and satisfactory process. The intelligent use of this method and the more universal employment of sputum examinations in people who cough would help greatly in what still remains fundamental in tuberculosis control, discovery of early cases and sources of infection.

1 County and city having 12 per cent of the State's total population has 22 per cent of the State's tuberculosis.
4 Counties and cities having 22 per cent of the State's total population have 38 per cent of the State's tuberculosis.
10 Counties and cities having 32 per cent of the State's total population have 51 per cent of the State's tuberculosis.

War and Tuberculosis

There are many reasons for never letting up on the fight against tuberculosis which is far from having been conquered, and war itself is a major reason, for it has been shown that the tuberculosis death rate increased in England in 1941 nearly 10 per cent, and 15 per cent in young women and adolescent girls. The same phenomenon occurred in the first World War.

It has been stated that eighteen workers at home are required to keep one soldier in the fighting area, and this is certainly a most important reason for maintaining the health of the entire nation to the highest degree possible. Replacement of worker loss and fighter loss must come eventually from the younger ranks. That they may come most efficiently equipped to take their places as workers and fighters they must have had, all of their lives, abundant and proper food, protection from disease, and education and training designed to make them self-supporting. The promotion of proper nutrition and hygiene and protection from infection by the State and local health departments plays an important part in tuberculosis control. Much more can be done by intensifying case-finding programs in the more populous cities where tuberculosis death rates are higher and tuberculosis patients are more concentrated. For instance, the following can be shown:

AUGUSTA'S DR. SYDENSTRICKER REPORTS BRITAIN IS BETTER NOURISHED THAN BEFORE THE WAR

LONDON, Aug. 12.—(AP)—Dr. V. P. Sydenstricker of the University of Georgia reported today that after five months of research on Britain's wartime dietary deficiencies, he found that "apparently there is less malnutrition, especially among workers and children, than before the war."

Speaking at a press conference, he attributed the improvement to elimination of unemployment, equalization of food distribution through rationing, supplementary feeding in schools, and "the amazingly efficient work" of the ministries of health and food in teaching people to make the most of available foodstuffs.

Simultaneously the ministry of health reported substantial decreases in the most prevalent infectious diseases in England and Wales during the first seven months of this year compared with 1941.

The most striking decreases, it said, were in enteric fevers, of which there were only 531 cases in seven months this year, compared with 2,539 in seven months of 1941 anl 709 in 1939 before the war; and poliomyelitis, with 186 cases compared with 265 in the comparable 1941 period and 279 in 1939.

—Augusta Herald, Augusta,
Aug. 12, 1942.

VITAMIN B IN EMESIS AND HYPEREMESIS GRAVIDARUM

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RICHARD TORPIN, M.D.
Augusta

Nausea and vomiting of pregnancy have been treated with a great variety of drugs. Each had a certain percentage of cures, which suggests the presence of a psychic element at least in some cases.

A preliminary report on a smaller group of cases of nausea and vomiting of pregnancy treated with vitamin B was made by us. Most of our patients reported relief, particularly when several vitamin B factors were used together. In other studies the reports vary from excellent to fair. The patients in our study are all from a charity clinic and many of them were known to be on a borderline diet. Some of them had other associated symptoms that are commonly associated with pellagra; in fact, there were four known pellagrins among them who attributed their complaints to the pellagra.

There was a total of 48 patients who complained of nausea and vomiting, 37 of whom were studied satisfactorily. Some of them were in early pregnancy, and some in late. Many of those who were in late pregnancy had vomited throughout gestation. Some vomited only in the morning or at night, while others vomited several times a day. Six of the group were sufficiently ill to necessitate hospitalization. For the most part the patients were fairly healthy, although a few were losing weight and on the down-grade when seen.

For the ambulatory patients no attempt was made to regulate their mode of life or diet. Their only requirement was to take the medicine according to instructions and report regularly for check up.

In this series we used TRN6P orally, one tablet three times a day, in eight cases. Seven of them were relieved in a week; the eighth patient said that she felt better but continued to vomit occasionally until time of delivery. Nicotinic acid in doses varying from 150 to 200 mg. a day, was given 29 patients. Of those who received nicotinic acid, eight failed, eight were completely relieved, nine were partially relieved, and four were not followed sufficiently. Among those who received partial relief it was rather interesting to note that they almost invariably reported that the vomiting had stopped but that the nausea persisted in some degree. If they were not given the TRN6P tablets the vomiting would probably recur in about three weeks, despite the nicotinic acid. TRN6P was administered to five and their nausea completely disappeared. Where relief was obtained the average patient usually noticed it about two days after starting the medication.

One patient received 15 mg. thiamine chloride, 6 mg. riboflavin, and 150 mg. nicotinic acid a day, orally, with good results.

Six patients were in the hospital because of severity of symptoms or, as in one case, the patient had a laparotomy which was followed by nausea and vomiting. Each gave a history of being unable to keep anything down. On admission one of them was stuporous and was vomiting dark, blood-stained material. Three patients received 2,000 cc. of 5 per cent intravenous glucose in saline the first day, along with 100 mg. of thiamine chloride, 200 mg. of nicotinic acid, and 10 mg. of riboflavin, by the parenteral route. Each took soft diet the second day and only one lost any food, although each vomited a few times. The medication was changed the second day to the oral route. Two patients vomited after the second day but they stopped by the fourth day.

One patient who was pregnant had a laparatomy and started vomiting postoperatively. This continued for three weeks despite the usual treatment of dry diet, sedation, and parenteral fluids. She was started on intensive parenteral vitamin B

(Continued on page 371)

The TRN6P is an experimental product of Merck and Company. Each tablet contains thiamine 5 mg., riboflavin 5 mg., nictinomide 25 mg., pyridoxine (B_6) 6mg., and pantothenic acid 25 mg.

From the clinics of the City Hospital, Louisville, Ky., and the University Hospital, Augusta, Ga.

Read before the Louisville Obstetrical and Gynecological Society, Louisville, Ky., Jan. 26, 1942.

★ THE PRESIDENT'S PAGE ★

AUGUST 24, 1942

Tonight marks the end of my thirty-first year of practice in Albany. Today was a long, hard day. Already 20 per cent of Albany doctors are in the service of our country. Another received his call today and several more expect report calls any day. They are as fine a lot of young doctors as could be found anywhere. They are loyal Albanians, true Georgians and superb Americans, willing to sacrifice all for freedom. Dear boys, we older men salute you and promise to carry on the best we can until you return. We pray it will not be long. If the time arrives when we, too, are called by our country we shall gladly join you in the great adventure.

Such intimate feelings are in the hearts of doctors throughout the State, I am sure. As your president I want all doctors in Georgia who go to war to know that I join with their intimates in admiration, respect and love.

An hour of this busy day was devoted to artificial pneumothorax refills for seven young patients, one a bride — a young soldier's wife. They want to live. They are entitled to live. They shall live! Thirty-one years ago treatment of tuberculosis in Georgia consisted of sending victims to mountains where it was believed they might nurture the germ of life. Climate failed us. *Rest* is all that helps. General body rest and rest to the diseased parts will cure in any climate. If found early and proper treatment is begun not only these victims can be cured but the disease will be eradicated. Most of the middle-aged and older tuberculous individuals whose disease is far advanced are incurable. They should be isolated when possible to stop the spread.

The curable cases must be treated at home largely. Alto can care for only about 10 per cent of Georgia's young men and young women in the grip of pulmonary tuberculosis.

Fear of the disease is widespread even among doctors. This along with the fact that poverty and tuberculosis generally are associated accounts for general indifference.

The spread of tuberculosis is usually through continuous contact over months or years. It is said to be only about as contagious as pneumonia. We doctors can create sentiment favorable to building wards for care and treatment of tuberculous patients at our general hospitals which was first recommended by the National Tuberculosis Association more than 25 years ago. After studying this resolution the American Medical Association and the American Hospital Association soon adopted it and several years ago the Medical Association of Georgia endorsed the same resolution.

We are told by authorities who are studying the disease in Georgia that one million Georgians now would show positive tuberculin skin reactions. Moreover, ten thousand cases now need hospital treatments. Alto can care for only about six hundred. What a challenge to Georgia doctors! We must either have built treatment centers and care for these tuberculous citizens or admit indifference or inability to wage the fight and invite Federal and State care.

This may be an entering wedge for "state medicine." If we persist in treating certain diseases and avoiding others surely we cannot seriously object to "state medicine" and "state surgery" joining public health in preventive medicine. So far as I know no doctor in Georgia favors bureaucratic medicine.

The best way to prevent "state medicine" is to accept the challenge and fight any and all diseases wherever found within our reach. By so doing we will not only win over diseases and bureaucratic government but we will win victories over selfishness. Young people of Georgia your doctors will not let you down.

James A. Redfearn, M.D.

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SPLENECTOMY AS A THERAPEUTIC PROCEDURE

It is now well established that the removal of the spleen is not followed by any deleterious results, and that an individual can live without the spleen to a normal old age. Theoretical considerations against the procedure have included the possible loss of body resistance because of loss of reticulo-endothelial tissue, but evidence does not support this. It is well established that splenectomy is indicated for certain conditions and diseases.

First, splenectomy is indicated for the *traumatized spleen* in which there is evidence that hemorrhage is occurring, particularly if the degree of hemorrhage seems to be sufficient to threaten the life of the patient.

The value of splenectomy in *congenital hemolytic icterus* is also well established. Many patients with this disease, particularly in its more latent form, may live a fairly normal existence without the spleen ever being removed, but many of them do so in a state between good and poor health and are more or less chronic anemic invalids. As to whether or not the spleen should be removed in congenital hemolytic icterus depends entirely upon the severity of the disease in that person. If the red cell destruction is sufficiently severe to cause the bone marrow to maintain a sustained increased reticulocyte output of over 5 per cent, this within itself should be sufficient indication for splenectomy, because even though the patient may be able to maintain his normal red cells over a number of years, if he is subjected to an unusual strain such as an infectious disease, there may be complete collapse of the bone marrow functional capacity. Splenectomy in congenital hemolytic icterus, therefore, is not only a therapeutic measure, but a very worth while preventive measure.

The third condition in which splenectomy is indicated is *thrombocytopenic purpura* in which there may be recurrent attacks of thrombocytopenia associated with multiple hemorrhages of varying types. It is important, of course, that all other possible causes for thrombocytopenia be ruled out before splenectomy is considered. Accurate diagnosis is of extreme importance in any disease in which a splenectomy is contemplated. It is my opinion that the spleen of thrombocytopenic purpura is a normal spleen, both grossly and microscopically; although it may be functionally abnormal, it appears to be histologically normal. The evidence that there is present in such spleens a thrombolytic substance that has been called thrombocytopen has not been entirely confirmed. It seems likely that the removal of the spleen in this disease merely removes the normal destructive platelet mechanism so that the reduced number of platelets are permitted to circulate for a longer period of time.

Banti's disease has been stated to be cured by splenectomy, but this is not necessarily true since it depends entirely on the extent of the disease. In the first place, a diagnosis of Banti's disease is extremely difficult to establish and it is questionable if such a label should be applied to a disease process unless there is sufficient amount of damage to the liver to give rise to clinical manifestations of liver insufficiency. The prognosis of a splenectomy patient with Banti's appears to depend upon the extent of liver damage. Removal of the spleen, particularly in young children in early cases, appears to be of some therapeutic benefit. In the far advanced case, with cirrhosis of the liver, little benefit should be expected from splenectomy.

Furthermore, it has been proposed that splenectomy should be done in hematologic disorders designated as *hypoplastic anemia* in which the bone marrow output of red cells, white cells, and platelets, is sufficient to maintain life but only after the normal destructive influence of the spleen is removed. This is an extremely questionable indication for splenectomy, particularly because of the difficulty in arriving at such a

diagnosis.

A new indication for splenectomy has recently been described in detail by Wiseman and Doan. This is called "*splenic lysis of granulocytes*" or "primary splenic neutropenia." These authors have reported five cases which were characterized by *marked granulocytopenia, splenomegaly*, and most important of all, a *normally functioning bone marrow*. Splenectomy in these five cases was followed by almost immediate hematologic cure. The diagnosis of this syndrome depends on a careful evaluation of bone marrow function so this would appear to be another disease in which bone marrow studies are extremely important.

In any condition in which splenectomy is contemplated it should be emphasized that this is a procedure of last resort and should be done only after careful, meticulous, and prolonged diagnostic studies. The most important thing about splenectomy is accuracy of diagnosis.

Roy R. Kracke, M.D.

VITAMIN B IN EMESIS AND HYPEREMESIS GRAVIDARUM

(Continued from page 268)

therapy and the vomiting stopped promptly the first day of vitamin treatment.

Another patient of six months' gestation had nausea and vomiting for six days, so severe that she was markedly dehydrated and acidotic on admission. Her only treatment, beyond fluids by mouth when retained, was thiamine chloride, 50 mg. intravenously, twice a day. Within 24 hours the vomiting ceased and she was able to retain a regular diet.

One of the group had delivered a premature fetus and had a retained placenta for three days. She made an uneventful recovery after the placenta was delivered and went home on the tenth day. On the twelfth day she returned with a history of keeping nothing down for two days. She was given parenteral glucose in saline upon admission, with 100 mg. of thiamine, 200 mg. of nicotinic acid, and 10 mg. of riboflavin, plus 50 mg. of B_6 and 50 mg. of pantothenic acid. The vomiting ceased and she ate regular meals next day.

The average ambulatory patient was given medicine for one week at a time. The majority were given a second week's treatment upon return, even though all symptoms had disappeared. In those where symptoms persisted, especially those receiving nicotinic acid alone, treatment was often continued over longer periods of time. Rather interesting was the fact that approximately half of these patients were in the last half of pregnancy, which is not the usual finding in private practice.

Discussion and Conclusions

Most likely a large percentage of these patients were sub-clinical pellagrins since many of them were known to be on the dietary borderline. Others probably had exhausted their vitamin B by vomiting. The metabolic increase and perversions accompanying the pregnancy probably served as precipitating factors.

The vitamin B factors seemed to be of definite value in a large proportion of our patients. Some ceased vomiting entirely, some had partial relief and a few were not benefited. Most of them said that they felt better. The very ill patients were usually hungry after receiving large doses of vitamins intravenously, even though they continued to do some vomiting for a few days after treatment was begun.

REFERENCES

1. Bernstein, A.: Hyperemesis Gravidarum, California & West. Med. 52:69-72 (Feb.) 1940.
2. McCollum, E. V.: The Diet of the Pregnant Woman, Am. J. Obst. & Gynec. 36:586-596 (Oct.) 1938.
3. Graham, J. W.: Radiation Sickness; Treatment with Nicotinic Acid, J. A. M. A. 113:665-667 (Aug. 19) 1939.
4. Spies, T. D.; Bean, W. B., and Ashe, W. F.: A Note on Vitamin B in Human Nutrition, J. A. M. A. 112:2414 (June 10) 1939.
5. Williams, P. F.: Nutrition in Pregnancy, Am. J. Surg. 40:118-124 (April) 1940.
6. Imler, A. E., and Wammack, H.: Vitamin B in Irradiation Sickness, Am. J. Roentgenol. 43:243-248 (Feb.) 1940.
7. Frostig, J. P., and Spies, T. D.: The Initial Nervous Syndrome of Pellagra and Associated Deficiency Diseases, Am. J. M. Sc. 199:268-274 (Feb.) 1940.
8. Sydenstricker, V. P.: The Syndrome of Multiple Vitamin Deficiency, Ann. Int. Med. 15:45-51 (July) 1941.
9. Sydenstricker, V. P.: The Clinical Manifestations of Nicotinic Acid and Riboflavin Deficiency (Pellagra), Ann. Int. Med. 14:1499-1517 (March) 1941.
10. Williams, and Fralin: Nutritional Study in Pregnancy, Am. J. Obst. & Gynec. (Jan.) 1942.
11. Hart, B. F.; Sydenstricker, V. P., and Torpin, Richard: Vitamin B in Nausea and Vomiting, Bulletin University of Georgia Hospital (Dec.) 1941.
12. Ashworth, John, and Sutton, Don C.: Effect of Estrogen on Utilization of Vitamin B Complex, Arch. Int. Med. 69:15-22 (Jan.) 1942.

The Medical Association of Georgia will hold its ninety-fourth annual session in Atlanta, May 12-14, 1943.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

THE PHYSICIAN ON ACTIVE DUTY AT HOME

Sympathy and admiration flow freely for physicians abandoning careers and homes to enter military service. Their sacrifice is real and they deserve commendation. The armed forces demand adequate medical personnel. Military medical needs must and are being met. Future needs will be met. But what of civilian needs? And what of the ever-increasing medical load on those physicians who must stay behind?

Military medicine and civilian medicine present quite different pictures. Military medical personnel is recruited on basis of anticipated need; civilians must share the remainder. Military medicine is regimented; civilian medicine is not. Physicians in the armed forces are assigned on basis of manpower; personal desires dictate the distribution of physicians at home. Military medicine is made efficient through organization; civilian medicine is made inefficient by the necessity of catering to individual personalities. Discipline insures the effective utilization of medical care by the armed forces; individual inclinations and desires determine civilian usage of medical care. Maximum protective measures against preventable diseases are routine procedure for service men. Civilians accept or reject preventive medicine according to the dictates of their conscience.

These constitute but a few of the contrasting principles of military medicine and civilian medicine. It is not suggested that military methods be applied to civilians, but it is suggested that inefficiency in civilian medicine be acknowledged. The problem of civilian medicine in war time must be recognized. Once fully recognized it can be analyzed and a feasible plan evolved to reduce inefficiency.

Numerous peacetime activities have been converted to war work; many have been entirely eliminated. Automobile production has been halted in favor of war implement manufacture. But medical care is a necessity which cannot be postponed for the duration of the war. Many types of illness cannot be postponed or prevented. Etiologic agents do not recognize war—except as an ally. Cancer cells are oblivious to world conflict. A sick and suffering individual cannot put aside his pain until peace returns.

The physician entering military service knows that his patients will become some other physician's patients. The physician at home may expect to increase his number of pay patients and his total income. In like ratio, his charity cases will also increase. Medical services are needed by all social strata and charity cases cannot be shirked. The military physician will be doing difficult and often hazardous work: the physician at home will have an equally difficult task.

Sympathy and understanding of his plight will be needed by the physician at home. His efforts must be publicly appreciated and his time conserved. His stamina must be maintained, his rest assured and his services made efficient. This is the profession's and not the individual physician's job. The profession must demand public cooperation. To say that it is not possible to provide a satisfactory service is not an intelligent answer to the problem. It will require much effort to evolve the most feasible means of rendering adequate medical care during war time but it can be done.

No effort will be made to prognosticate the varying problems which the physician on the home front will face, as many unforeseen events may come to pass. However, a number of contingencies appear on the horizon. At present numerous necessary items are being rationed. Americans are beginning to realize through actual experience what rationing means. In the past, medical care has been rationed partly on the basis of income. Supply and demand will no doubt make it necessary to strictly ration medical care without regard to financial status. There are no regulations and none should be necessary, but voluntary planning should be utilized. The case of civilian medicine needs careful analysis and an effective prescription. When will this be done?

How will medical care be affected by rationing? Upon what measure shall we depend to determine the basis for medical service? The varying number of physicians in different localities must of necessity influence individual planning.

The American public dislikes inconvenience. It will particularly dislike being inconvenienced medically. The patient who insists on a home visit although he could make an office visit without endangering his health will not be easily appeased. The individual physician cannot change his policy regarding home and office visits without losing patients. The public will not voluntarily cooperate to conserve the physician's time and effort. Therefore, the medical profession must formulate the basis for equitable service.

It is not sufficient that present emergency needs be met. The health of the nation must be maintained. Epidemics may occur. A sudden increase in physicians' services would be obligatory. This would further deplete services necessary under average conditions.

Many physicians are specialists. Can the specialist remain a specialist in war time? Would not the admission, "I know nothing of other fields," weaken public confidence? Can a physician remain completely isolated in his field and refuse general services? Should not every physician become acquainted with general medicine during this emergency?

Frills have for years been a part of medical service. They are admittedly a part of good medical practice and are necessary in some cases. Now, however, can they be indulged in without seriously hampering efficiency? How many and what kind of routine procedures can be curtailed to insure greater efficiency? It may not be a question of ideal medical practice but rather a question of maximum service consistent with acceptable practices to those most in need.

What is the future of small hospitals whose surgeons have gone or are going to war? Should surgical service be discontinued in such hospitals? The surgical cases will most assuredly continue to occur. Will it be necessary to remove them to other hospitals or will surgeons be made available on a call basis from nearby points? What about hospitals now closed because of staff depletion? Other specialists are missing and the non-surgical practitioner may be forced to become a surgical practitioner.

Plans are under way to establish emergency base hospitals and, in the event of an incident, they must be staffed. To do so will further reduce community medical resources. In those areas with greatly increased population, where will additional medical assistance be secured? Should the State Defense Corps be activated, medical care will be necessary for the units. In event of emergency, the Emergency Medical Services must take precedence over general work. If citizens are evacuated, medical care must be provided for them. When and how will the physician acquire the most recent knowledge regarding treatment of chemical warfare victims and those wounded by enemy action? Courses on such treatment will no doubt be made available but the local physician must be relieved if he finds time to attend classes.

With the depletion of resident hospital staffs, physicians must render hospital routine previously assigned to interns and residents. Office nurses will be called to military duty and this valuable assistance disrupted. What is to be done to relieve hospital congestion to permit care of casualties? Will the profession limit hospital care to those who need it, so beds will be available in an emergency? How can dependents of military personnel be best cared for and what responsibility will the army assume? What aid will be needed to assist communities in handling these problems?

Industry has been revolutionized. Thousands of new employees are at work. Accidents will be more frequent. The health of the industrial worker is important as it determines his productivity. The health of the worker's family will also affect his production. New medical problems are arising from new industries and all industrial needs cannot be met. The most important services must be provided. What are they?

More clinics must be staffed if selective service registrants are to be treated for venereal diseases and made available for military service. This is just one of the clinical services that must be considered. How can the physician's time be reduced to the minimum consistent with acceptable clinic programs?

Medical resources constitute a constant value swelled by new graduates and reducible by military requirements. The new graduates will find their way into the Army if physically fit. Facilities will not permit any sudden expansion of student enrollment and, if so, it would be some years before results would be realized. Few if any would favor inadequately trained physicians, as the results would be with us for many years.

Therefore, the solution of wartime medicine lies in the field of maximum efficiency of present facilities. This must be done as a nationwide and statewide plan, adapted to the community. Means of meeting needs are not within the scope of this article.

Public health agencies can render assistance but they await a plan of action. Public health will rearrange its activities and programs but does not feel entitled to define total mode of action for the profession. Local health departments have been streamlined but are subject to additional modification of programs. Public health is awaiting total professional consideration and attack.

A successful approach will require not only the ingenuity of the ablest and the sympathy of all, but the effort of every physician, an unselfish attitude, a disregard of pecuniary aspects and a spirit comparable to that of men in the service. Remember men and material win a war. Methods will vary. Agreement will prove difficult but to achieve the most constructive plan is paramount.

Physicians are now concerned about post-war medicine. The duration of the conflict is uncertain. Post-war medicine must await peace. Without successful termination of the war, the profession will be more concerned with post-war medicine in a totalitarian state than in post-war medicine. Post-war medicine might be war medicine. The opportunity to guide the program cannot be denied. The profession knows best how to plan medical care. However, the profession is not always as anxious to plan such care as are others. Instead of worrying about post-war medicine, the immediate concern is war medicine.

Edwin R. Watson, M.D., *Director*,
Division of Maternal and Child Health.

WOMAN'S AUXILIARY : OFFICERS 1942-43

President—Mrs. J. Lon King. 223 Buford Place, Macon.

President-Elect—Mrs. Wm. Bruce Schaefer, Toccoa.

First Vice President—Mrs. Harry M. Kandel, 432 Abercorn Street, Savannah.

Second Vice President—Mrs. Walter G. Elliott, Cuthbert.

Third Vice President—Mrs. Ralph W. Fowler, Marietta.

Recording Secretary—Mrs. J. C. Metts, 303 Anderson Avenue, Savannah.

Parliamentarian—Mrs. S. T. R. Revell, Louisville.

Treasurer—Mrs. Lucius N. Todd, Rural Delivery No. 2, Augusta.

Historian—Mrs. Jack R. McMichael, Quitman.

Corresponding Secretary—Mrs. Wallace L. Bazemore, 127 Beverly Place, Macon.

Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta

1942—OUR OBJECTIVES—1943

MRS. J. LON KING, *President*
Macon

THEME

Education and Cooperation in Meeting the State and National Needs

For Members:

I.—To know and feel the responsibility of the purpose and objectives of the Medical Auxiliary and its methods of organization. To know County Advisors, Chairman of State Advisory Committee and the names of County, District and State Auxiliary Officers and Chairmen.

II.—Regular attendance at all Auxiliary meetings, and pay dues promptly. Endeavor to interest all eligible doctors' wives in becoming Auxiliary members. Invite, as guest or associate members, doctors' wives from all camps and depots nearby.

III.—Accept the chairmanship of health and public welfare in other organizations.

IV.—Promote the health education program to lay organizations as outlined by the Medical Association of Georgia. Speakers and approved educational literature can be supplied. Special emphasis is again placed on Nutrition and Tuberculosis in the health program. Make special use of health films and radio programs.

V.—Know the platform of the American Medical Association. The rights of Organized Medicine are being questioned. The Auxiliary must stand by the Medical Association in the protection of them. Be informed on current legislation sponsored or endorsed by the Medical Association of Georgia. Register and vote.

VI.—Read the Auxiliary pages of the Journal of the Medical Association of Georgia, and the Atlanta Constitution, the first Sunday of every month. Send articles for both to the State Press and Publicity Chairman. Send Auxiliary news items to District and State Scrapbook Chairman.

VII.—Increase subscriptions to Hygeia and the National Auxiliary Bulletin.

VIII.—Assist in the entertainment of County, District and State meetings and promote unity and a growth in fellowship.

IX.—To promote, in all seriousness, health defense in wartime, enlisting the services of each member in the program of medical defense.

For Presidents and District Managers:

I.—Each county president and district manager upon assuming the duties of office should secure an Advisory Committee or Counsellor from the County or District Medical Society and be guided in all Auxiliary activities by them.

II.—District Managers taking office should appoint such committees corresponding to the State, Southern and National Auxiliary to succeed fully in conducting district work. (The District is primarily a unit for organization and counsel; the chief duty of the District Manager is to organize and strengthen auxiliaries within the District and plan suitable programs for District meetings.) Send list of officers and Chairman of Standing Committees to State President.

III.—County Presidents assuming office should appoint Chairmen, when possible, corresponding to the State, Southern and National Auxiliaries and send list to State President.

1. Organization
2. Health Education
3. Public Relations
4. Press and Publicity
5. Legislation
6. Hygeia
7. Scrapbook
8. Health Films (Visual Education)
9. Doctor's Day
10. Research in Romance of Medicine
11. Historian
12. Student Loan Fund
13. Jane Todd Crawford Memorial
14. Archives
15. Exhibits

Auxiliaries with a necessarily small membership should not be discouraged because of impossibility of having all committees, but should endeavor to promote main objectives of the Auxiliary work.

IV.—County Presidents and District Managers are asked to make necessary revisions in their Constitution and By-Laws if needed, and send new copies of same to State President Elect. County and District Auxiliaries are asked to have their term of office run concurrently with the State Auxiliary, electing officers in April to

assume their duties *after* the State Convention. All dues must be in to State Treasurer by the fifteenth of March.

V.—County Presidents and two accredited delegates are to represent their Auxiliary at the State Convention. Presidents should send in reports on time and be ready to give reports at the Convention.

VI.—District Managers are to represent their District at the State Convention and give in their reports the outstanding work done in their districts.

VII.—"Observe Doctor's Day," March 30th, in a manner fitting to those who have and are daily giving their best to humanity.

VIII.—Contribute to Student Loan Fund and Health Film Library.

IX.—Arrange interesting programs for each Auxiliary meeting. Keep attuned to the times and have speakers who know their subject. Follow programs according to the Auxiliary aims.

X.—Each Auxiliary is urged to write a yearly history which is typed in triplicate, one, filed locally, one each to District and State Historians. Encourage papers on Research in Romance of Medicine. All important Auxiliary papers should be sent to the Chairman of Archives.

XI.—State Chairmen will send their recommendations to you. Please read carefully, then give to your corresponding County Chairmen and help them with their plans.

To the Members of the Auxiliary:

Greetings! Shortly the fall meetings of the Auxiliary will be starting. These meetings ought to be planned well in advance and must have a well-rounded program of health instruction.

Our nation's mind is centered on one objective. The minds of all its people are focused on that objective, too. That objective has and is reaching into the recesses of our homes and taking away one or more. Thus, it leaves so many restless, uprooted and anxious.

But if the Auxiliary is to mean to the Medical Association of Georgia what it was organized to be, it must strengthen its lines and gird itself to be a guard of the home-front.

There is the theme of the Auxiliary for this year: "Education and Cooperation in Meeting the State and National Needs." That offers many avenues of service and each Auxiliary member can find within that scope many things that she can do to help with the health program of the State and the National defense work.

The year calls for stern discipline of each member and full cooperation with the Medical Association of Georgia.

The Medical Auxiliary has a standard to protect and a place to keep in the eyes of the people of this State. The physician is called to give his best. What is expected of his wife? Nothing less!

Do let the fall meetings be ones of greater effort than ever before.

Grace Ide King, *President*
(Mrs. J. Lon King).

OFFICERS AND CHAIRMEN OF COMMITTEES

Officers

President: Mrs. J. Lon King, 223 Buford Place, Macon
President-Elect: Mrs. Bruce Schaefer, Richmond Hill
First Vice President: Mrs. H. M. Kandel, 432 Abercorn St., Savannah
Second Vice President: Mrs. W. G. Elliottt, Cuthbert
Third Vice President: Mrs. Ralph Fowler, Marietta
Recording Secretary: Mrs. J. C. Metts, Gordonston, Savannah
Corresponding Secretary: Mrs. Wallace Bazemore, 127 Beverly Place, Macon
Treasurer: Mrs. Lucius N. Todd, Forest Hills, Augusta
Historian: Mrs. J. R. McMichael, Quitman

Chairmen of Committees

Health Education: Mrs. H. M. Kandel, 432 Abercorn St., Savannah
Hygeia: Mrs. W. G. Elliott, Cuthbert
Scrapbook: Mrs. Ralph Fowler, 303 McDonald St., Marietta
Parliamentarian: Mrs. S. T. R. Revell, Louisville
Public Relations: Mrs. H. D. Allen, Jr., Milledgeville
Legislation: Mrs. Chas. C. Harrold, 550 Orange St., Macon
Press and Publicity: Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta
Visual Education: Mrs. Leo Smith, Waycross
Doctors' Day: Mrs. Leonard Massengale, Lumpkin
Research in Romance of Medicine: Mrs. W. T. Randolph, Winder
Student Loan Fund: Mrs. H. G. Banister, Ila
Jane Todd Crawford Memorial: Mrs. Ralph H. Chaney, Forest Hills, Augusta
Revisions: Mrs. Jas. N. Brawner, 2800 Peachtree Road, Atlanta
Archives: Mrs. Eustace A. Allen, 18 Collier Road, N. W., Atlanta
Exhibits: Mrs. Edgar D. Shanks, 1431 Fairview Road, N. E., Atlanta
Mrs. Jas. N. Brawner Trophy: Mrs. Lee Howard, 625 East 44th St., Savannah.

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Olin H. Weaver.....Macon
Eustace A. Allen.....Atlanta
C. Dan Bowdoin.....Atlanta
A. S. Bacon.....Atlanta
J. Lon King.....Macon

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Mrs. J Bonar White, 769 Penn Ave., N. E., Atlanta
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Mrs. Warren A. Coleman, Eastman
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Mrs. H. G. Banister, Ila
Mrs. Lee Howard, 625 East 44th St., Savannah

DISTRICTS, MANAGERS AND PRESIDENTS OF COUNTY SOCIETIES

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Mrs. Waldo E. Floyd, Statesboro, Bulloch-Candler-Evans Counties.
Mrs. L. F. Lanier, Sylvania, Burke-Jenkins-Screven Counties.
Mrs. R. V. Martin, Savannah, Georgia Medical Society (Chatham County).

Second District

Mrs. Carl S. Pittman, Tifton, Manager.
Mrs. A. G. Funderburke, Moultrie, Brooks and Colquitt Counties.
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Mrs. I. J. Parkerson, Eastman, Dodge County.
Mrs. R. L. Cater, Perry, Houston and Peach Counties.
Mrs. H. C. Derrick, Oglethorpe, Macon County.
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Mrs. T. F. Harper, Coleman, Randolph and Terrell Counties.
Mrs. Russell Thomas, Americus, Sumter County.

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Mrs. J. H. Jackson, Barnesville, Chairman, Lamar County.

Fifth District

Mrs. J. Harry Rogers, Atlanta, Manager.
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Sixth District

Mrs. J. B. Dillard, Davisboro, Manager.
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Mrs. Kenneth C. Walden, Waycross, Ware County.

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Mrs. W. T. Randolph, Winder, Manager.
Mrs. C. B. Almand, Winder, Barrow County.
Mrs. Newton J. Coker, Canton, Cherokee County.
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Mrs. M. B. Allen, Hoschton, Jackson County.
Mrs. W. B. Heller, Toccoa, Stephens County.

Tenth District

Mrs. G. L. Loden, Colbert, Manager.
Mrs. H. W. Birdsong, 150 University Drive, Athens, Clarke County.
Mrs. Claude E. Tessier, Forest Hills, Augusta, Richmond County.

Note: Constitution and By-Laws of the Woman's Auxiliary to the Medical Association of Georgia.

Article III. By-Laws: Committees.

Section I. The Executive Committee (or Executive Board) shall be composed of all Officers, District Managers, Chairmen of Standing Committees, and Presidents of County Auxiliaries. Past Presidents shall be members of the Executive Committee with power to vote. The Committee shall elect a Chairman and through her make a report at the annual meeting.

BOOK REVIEW

The Mind and Its Disorders. By James N. Brawner, M.D., Medical Director, Brawner's Sanitarium, Smyrna, Ga. Cloth. Price $3.50. 228 pp. with 7 illustrations. Walter W. Brown Publishing Company, 223 Courtland Street, N. E., Atlanta, Ga.

The author states that during the past few years he has been requested by many of his friends among physicians to write a book describing briefly, and in language as simple as the subjects will permit, the neuroses, psychoneuroses and psychoses. The book is divided into four parts.

Part I is devoted to a brief description of the mind as related to the cerebral structures and functions. In this section the feelings, emotions, intelligence, memory, excitations and inhibitions, cerebral centers and reaction units are considered. There is also a chapter on abnormal mental symptoms defined as related to disturbed cerebral functions where there is given certain definitions of abnormal mental reactions which are not found in the majority of books on mental disorders. There is also a chapter on the electrical impulses of the brain and the electroencephalograph.

Part II is devoted to the etiology, symptomology and treatment of the psychoses. The grouping of these disorders is simple and while the classification differs from that recommended by the American Psychiatric Association to some extent, yet to the average physician it is probably easier to understand. Rabies or hydrophobia is described as one of the infectious diseases involving the mental regions of the brain, and though the patient lives only three to five days after the mental symptoms are first noticed, it is evident that during

this time the mind is affected. So far as the reviewer is aware this is the first time rabies has even been included in a book on mental disorders.

In Part III there is given a brief description of the neuroses and psychoneuroses. In this is included such disorders as migraine, neurasthenia, the neurasthenia of deep thinkers, occupational neuroses, the anxiety psychoneuroses, the compulsion psychoneuroses, hypochondriasis and hysteria. These disorders are described in some detail and in some he gives the neurologic mechanisms or what is described as abnormal channeling in the mental regions of the brain due to either psychic traumas in early life or to toxic states in which there is a specific affinity for the toxin to certain nerve cells which bring about abnormal mental reactions. So far as the reviewer is aware, the chapter on neurasthenia of deep thinkers (the philosopher's neurosis) is not to be found in any other book on mental disorders. The hypothesis advanced is certainly most interesting and seems reasonable.

In Part IV is given a brief description of related subjects. There is first a brief description of four types of criminals; (1) the atavistic criminal, (2) the environmental criminal, (3) the diseased criminal, (4) the normal criminal. There is also a brief review of the psychologic teachings of Herbert Spencer and Sigmund Freud, which is a historic presentation and doubtless will be of interest to some readers. There is also an article entitled, "Is the cerebellum inhibitory in function? (four experiments suggested)." The author states in his preface that "I have also given a description of those atavistic mental reactions seen in practically all mental disorders in which the patient reverts emotionally, intellectually and expressively to the reactions of his primitive ancestors (paleophrenia)." The book, when taken as a whole, will no doubt be of interest to the majority of surgeons, internists and general practitioners.

NEWS ITEMS

DR. CHARLES C. HEDGES and DR. LAWRENCE LEE, both of Savannah, were principal speakers at the quarterly conference sponsored by the Federal Bureau of Investigation, held in the Municipal Auditorium, Savannah, July 31, 1942.

DR. W. P. SMITH, Bowdon, has removed his office to the Perdue Building which is more convenient for his patients.

DR. J. R. SAMS, Covington, resumed practice August 1 after being absent from his office for several weeks due to illness.

DR. C. C. HEDGES, Savannah, city-county health officer, spoke before a meeting of the Kiwanis Club July 28. He said that people who thought a segregated district was the best scientific control of venereal diseases were "misguided and misinformed."

DR. GEORGE O'DANIEL, formerly of Washington, D. C., has assumed duties at Coker's Hospital, Canton, where he will be associated with Dr. Grady N. Coker and Dr. Robert T. Jones.

DR. J. M. TRIBBLE, mayor of Senoia, has been called to active duty in the U. S. Army Medical Corps. He held the rank of Colonel in the Reserve Corps.

DR. M. M. BURNS, Pelham, and DR. H. L. EARL, Sparta, attended the Southern Pediatric Seminar at Saluda, N. C., held in July.

THE following physicians have recently enlisted in the U. S. Army, Navy or war activities: Dr. Braswell E. Collins, Waycross; Dr. L. M. Freedman, Savannah; Dr. W. R. McGinty, Moultrie; Dr. James C. Metts, Savannah; Dr. Lovick Pierce, Waycross; Dr. J. M. Tribble, Senoia, and Dr. Charles N. Wasden, Macon.

DR. I. H. MOORE, Sparta, State Department of Public Health, in an interview given a representative of the *Macon Telegraph*, said: "Give me the toughest, meanest, most worthless ne'er-do-well you've got in Georgia, and in three years of working with him and properly feeding him, I can convert him into a good and useful citizen, able to earn his own living."

THE FULTON COUNTY MEDICAL SOCIETY met at the Academy of Medicine, Atlanta, August 17. Titles of scientific papers on the program were: *Ano-Rectal Fistulae in Children*, by Dr. Lee Bivings; discussed by Dr. Marion C. Pruitt and Dr. Hulett H. Askew. *Cardiovascular Allergies*, by Dr. Hal M. Davison, Dr. Jas. C. Thoroughman and Dr. Harold M. Bowcock; discussed by Dr. Clarence L. Laws and Dr. Vernon E. Powell. Articles published in *The Bulletin* were: *President's Message*, by Dr. Major F. Fowler; *The Kenny Method of Treatment for Infantile Paralysis*, Dr. C. E. Irwin; *Paroxysmal Tachycardia of Young Infants*, Dr. L. Minor Blackford and Dr. Lewis D. Hoppe; *The Treatment of Deep Burns and Contractures*, Dr. J. H. Kite; *The Pre-School Examination*, Dr. L. H. Muse.

DR. F. H. KILLAM, formerly of Trion, has moved to Greensboro where he will continue the practice of medicine.

DR. B. W. HARRIS, formerly of Trion, has moved to St. Simons Island where he has opened offices for the practice of medicine. Will serve as physician for the Sea Island Company.

DR. W. FRANK WELLS, Atlanta, was elected the Most Puissant General Grand Master of the Grand Council of Royal and Select Masons at Salt Lake City, Utah, at its triennial convention on August 25th. No Georgian has previously held this office. Dr. Wells has been at the head of all the subordinate bodies of York Rite Masons. In 1927 he held the office of Grand High Priest of Georgia Royal Arch Masons. In 1933 he was Grand Master of the Grand Council, Royal and Select Master Masons of Georgia. He is now Deputy Grand Commander of the Grand Commandery of Knights Templars of Georgia and a thirty-second degree Mason. He was elected to the General Grand Council of the United States in 1933 due to his prominence in Masonry in Georgia.

THE BIBB COUNTY MEDICAL SOCIETY met on the roof of the Doctors Building, Macon, September 1. Dr. Chas. C. Harrold presented *Unusual Cancer Cases*.

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

President—Frieda Grefe, R.N., Savannah
First Vice-President—Carrie Spurgeon, R.N., Atlanta
Second Vice-President—Mrs. Mae M. Jones, R.N., Milledgeville
Secretary—Mrs. Esther Watts, R.N., Columbus
Treasurer—Jane Van De Vrede, R.N., Smyrna
President, Georgia League of Nursing Education—Lucy Harris, R.N., Atlanta
President, Georgia State Organization for Public Health Nursing—Vera Mingledorff, R.N., Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, R.N., Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, R.N., Smyrna

Executive Secretary, G.S.N.A., Durice Dickerson, R.N.
Headquarters: 131 Forrest Avenue, N. E., Atlanta, Ga., Telephone: WAlnut 8911

ANNOUNCEMENT OF JOINT ANNUAL CONVENTION OF

36th meeting of the Georgia State Nurses' Association and her Private Duty Section; 17th Georgia State Organization for Public Health Nursing and her Industrial Section; 16th Georgia State League of Nursing Education; and the State Committee American Red Cross Nursing Service, October 4-7, 1942, Richmond Hotel, Augusta, Ga.

Mrs. Ellen Buchanan, Chairman, Local Arrangements Committee, 920 Merry Street, Augusta. Mrs. Olive Barbin, President, Tenth District G.S.N.A., and Co-Chairman of Local Arrangements Committee, 957 Russell Street, Augusta.

"Nursing at the Nation's Service" will be the theme for the convention and all programs are outlined to give a clear and definite picture of how nursing is placed at the Nation's service in a war time program.

Supply and Distribution of Nurses; Maintaining Nursing Standards in a War Emergency; Recruitment of Qualified Student Nurses; Problems, Principles and Practices of Industrial Nurses in Public Health; Lay Participation in Public Health Nursing; Chemical Gas Protection; Red Cross Nursing highlights; Test and Measurements for Nurses; Participation by Nurses in the Emergency Medical Program and Duties of State and Local Deputy Nurses, are main topics scheduled.

The significance of this program can be determined by the following prominent and efficient honor guests and speakers as well as members of the association who have been secured for this vital conference: Miss Alma C. Haupt, Executive Secretary, Sub-committee on Nursing, National Nursing Council for War Service, Washington, D. C.; Mrs. R. Louise McManus, Instructor, Teachers College, Columbia University, New York City; Honorable J. P. Woodall, Mayor of Augusta; Dr. Claire Henderson, Commissioner of Health, Richmond County, Augusta; Miss Gertrude Banfield, Assistant to the Director, American Red Cross Nursing Service, Washington, D. C.; Miss Helen Bean, Nurse Consultant, U. S. Public Health Service, New Orleans, La.; Miss Olive M. Whitlock, Regional Public Health Nursing Consultant, U. S. Public Health Service, Washington, D. C.; Dr. Edwin R. Watson, Deputy State Chief, Emergency Medical Service, Atlanta; Dr. Perry P. Volpitto, Professor of Anaesthesia, University of Georgia Medical School, Augusta; Mr. Henry G. Howard, Member Board of Directors, Chairman Home Service, Augusta Chapter, American Red Cross.

Meetings are scheduled for 10 a.m., Sunday, October 4th, and will continue through Wednesday afternoon, October 7th. The largest attendance in the history of the association is expected because nurses are anxious to secure more information as to how they can best cooperate to bring this war to a close and to make a lasting peace.

Each District, Local Nursing Council, and Nurse Deputy should renew efforts to analyze community nursing needs immediately. Pooling of nursing resources will be necessary to win the war. A resurvey of all registered nurses to determine current availability will be started soon. Durice Dickerson has recently been appointed State Nurse Deputy for the Emergency Medical Service and will work with Local Nurse Deputies in surveying and organizing nurse power for emergency civilian defense as well as aid in supplying nurses to the armed forces.

An all day conference of the State Nursing Council for War Service was held August 7, 1942, at Atlanta, with Miss Marguerite K. Jacobsen, Assistant Executive Secretary American Nurses' Association, New York City; Miss Zella Bryant, Nurse Consultant, U. S. Public Health Service; and Dr. Edwin R. Watson, Deputy State Chief, Emergency Medical Service, as guest speakers. Further plans for the work of this group were completed. Just preceding this conference on August 6th, Miss Marguerite Jacobsen conducted an Institute on Nursing Legislation. The Executive Board met on August 8th, and completed plans for the annual convention and outlined further work in relation to committee activities and local nursing councils.

DURICE DICKERSON, *Executive Secretary*,
Georgia State Nurses' Association.

Wood, instead of gasoline, as a fuel for U. S. automobiles was seriously proposed last week by Robert S. Arie of Brooklyn Polytechnic Institute, writing in *Chemical Industries*.

NEWS ITEMS

DR. ROBERT L. WHIPPLE, JR., announces the opening of his office for the practice of internal medicine at 502 Medical Arts Building, Atlanta.

THE BULLETIN of the Fulton County Medical Society published on September 7 was dedicated to its members enlisted in military service in World War II. It carries the names and addresses of its members in active service. Contributors to this number were as follows: Dr. L. Minor Blackford, *The 43rd General Hospital, Atlanta's Own;* names and addresses of officers in (Emory Unit) Hospital No. 43 (in France); names and addresses of nurses with Hospital No. 43; Dr. Frank K. Boland wrote a sketch of *The Emory Unit of* 1917-1919, *Base Hospital 43, United States Army, A. E. F.;* Dr. R. S. Leadingham, spoke on *A Challenge.*

THE GEORGIA CHAPTER of the National Foundation for Infantile Paralysis, Inc., has moved its headquarters from Atlanta to Warm Springs. Mr. Cason J. Callaway, of LaGrange, is State chairman.

THE TENTH DISTRICT MEDICAL SOCIETY and the Georgia Section of the Southeastern Surgical Congress held a joint meeting at the Georgian Hotel, Athens, September 17. Dr. W. W. Brown, Athens, made the Address of Welcome; Dr. E. D. Shanks, Atlanta, the Response to the Address of Welcome. Dr. J. A. Redfearn, Albany, president of the Medical Association of Georgia, spoke on *Forty Million Americans;* Dr. W. A. Selman, Atlanta, president-elect, *Procurement and Assignment Service;* Dr. George H. Bunch, Columbia, S. C., *Acute Appendicitis—Lantern Slides;* Dr. Robert Greenblatt, Augusta, *Management of the Amenorrhagic Patient;* Dr. E. R. Watson, Atlanta, Medical Service Operations, State Board of Health, *Emergency Medical Services—Slides;* Lt. Com. Matthew N. Hosmer, M. C., U. S. Navy, Preflight School, Athens, *Osteomyelitis of Bones of the Face in a Thirteen Year Old Diabetic, With Cure and Plastic Repair—Moving Pictures.*

THE NINTH DISTRICT MEDICAL SOCIETY will hold its next meeting in March, 1943.

DR. E. S. SANDERSON, Augusta, spoke before the Augusta Rotary Club on *Preventive Medicine* on August 18.

DR. C. W. CHURCHILL and DR. F. N. GIBSON, both of Thomson, have been appointed senior and junior local surgeons for the Georgia Railroad, respectively.

OBITUARY

Dr. William Walter Andrews, Tucker; member; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1900; aged 74; died on July 18, 1942, at his residence. He was born and reared in Dawsonville. Dr. Andrews began practice at Tucker and continued there for 41 years. He held the confidence and esteem of the people in the entire community. He served his State and Nation as a remarkable citizen, never wavered from the path of the righteous. He was a member of the DeKalb County Medical Society, American Medical Association and the Tucker Methodist church. Surviving him are his widow and seven children. Dr. R. B. Hayes conducted the funeral services from the Tucker Methodist church. Burial was in Fellowship cemetery.

Dr. John Calvin McCall, Jr., Savannah; University of Georgia School of Medicine, Augusta, 1907; aged 66; died on July 21, 1942, at a local hospital after a long illness. He practiced medicine in Sylvania for many years then retired and moved to Savannah. He was a member of the Jackson Baptist church. Surviving him are his widow, several nieces and nephews. Rev. John S. Wilder officiated at the funeral services, conducted from the Jackson Baptist church.

Dr. Josephus P. Bowdoin, Atlanta; member; Emory University School of Medicine Emory University, 1889; aged 76; died at a private hospital on August 6, 1942, after a short illness. He was born in Adairsville, Bartow county. After graduating in medicine Dr. Bowdoin practiced for 30 years in Bartow and surrounding counties, then served as Major in the United States Army during World War No. 1. After the war he became associated with the Georgia Department of Public Health, director of the Division of Maternal and Child Health. He was widely known over the State. He was editor of *Georgia's Health,* the Department's monthly publication. Dr. Bowdoin served two years as Grand Master of the Masonic Grand Lodge and at one time High Priest of the Royal Arch Masons of Georgia. He served many years on the Board of Trustees of the George Washington National Masonic Memorial Association, and was Trustee of the Masonic Orphans' Home at Macon. He was widely known in the State and held in high esteem. Surviving him are three daughters: Mrs. T. N. Ray, Norwood; Mrs. W. J. Crouch and Miss Mary Bess Bowdoin; two sons, Dr. C. D. Bowdoin, with the State Department of Public Health, Atlanta; and Max M. Bowdoin. Rev. Firley Baum officiated at the funeral services conducted from Spring Hill chapel. Adairsville Lodge No. 168, F. and A. M. was in charge of rites at the graveside with burial in Adairsville cemetery.

Dr. Charles Sanford Williams, Norman Park; University of Louisville School of Medicine, Louisville, Ky., 1880; aged 84; died on July 27, 1942, after a short illness. He had practiced medicine for 60 years. He began practice in Kentucky, then in Missouri, Mexico and Colorado before he moved to Norman Park where he had practiced nine years. Dr. Williams was charitable and was never known to shirk his professional duties. He was a member of the McCrostic Creek Baptist church of Missouri. Surviving him are his widow, two children, one daughter, Mrs. Bencine, Murfreesboro, Ky.; one son, Guy G. Williams, Lucerne Valley, California. Burial was in Carrollton, Kentucky, cemetery.

Dr. John Lipscomb Frazer, Fitzgerald; member; University of Louisville School of Medicine, Louisville, Ky., 1891; aged 75; died suddenly at his home on August 9, 1942. He was born at High Shoals, Ga. After he gradu-

ated in medicine, he took post-graduate study at Johns Hopkins University School of Medicine, Baltimore. He began practice in McRae, where he was favorably known by many families. Later Dr. Frazer located at Fitzgerald and practiced there until he retired. Surviving him are his widow; one daughter, Mrs. Howard Shirley, St. Louis, Mo.; seven sons, Captain John L. Frazer, U. S. Navy, located at Iceland; Dugas Frazer, California; Robert Frazer, Akron, Ohio; William Frazer, Gadsden, Ala.; Walter Frazer, Miami, Fla.; Nat Frazer, Cochran; and Frank Frazer, Air Corps, Camden, S. C. Rev. P. H. Anderson, Jr., and Rev. J. O. J. Taylor officiated at the funeral services conducted at the First Baptist church in Fitzgerald. Burial was in Evergreen cemetery at Fitzgerald.

Dr. James A. Smith, Lyerly; member: University of Louisville School of Medicine, 1880; aged 85; died on August 17, 1942. He was born in Hawkinsville, Pulaski county. He began practice in a community known as Chattoogaville near Lyerly where he lived until two years ago when he moved into Lyerly. Dr. Smith was one of the pioneer doctors of that community and was extensively known. Many of his calls in his earlier days were made on horseback, then a cart known as a "sulky," later used an automobile. He was the oldest living member of Sardis Baptist church at Chattoogaville where he had been a member for 59 years. Surviving him are his widow and a few nieces and nephews. Rev. D. B. Maffett conducted the funeral services from the Sardis Baptist church. Interment was in Johnson cemetery.

The JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

ANNOUNCEMENT OF FELLOWSHIPS IN MEDICINE AND PUBLIC HEALTH

Offered by the Commonwealth Fund of New York Through the Pan American Sanitary Bureau

The Commonwealth Fund of New York, a philanthropic foundation established in 1918 by the late Mrs. Stephen V. Harkness, announces that it is offering through the Pan American Sanitary Bureau fifteen fellowships for one year's study of public health subjects or postgraduate medical courses to properly qualified persons who are citizens of the other American republics. Fellowships in public health will be open to physicians, sanitary officers, technicians, public health nurses, etc. These fellows will be selected through a system of cooperation with medical and health authorities of the different countries concerned, and whenever deemed advisable they will be interviewed by traveling representatives of the Pan American Sanitary Bureau. Each fellowship will provide living allowances while the holder is in the United States, travel costs, and tuition. Knowledge of the English language will be among the requirements, and also the possession of certain specific qualifications.

The Pan American Sanitary Bureau, the international health agency of the American republics, has been for some time the recognized clearing house for medical and public health fellowships in the United States, nearly 100 Latin Americans now being in the United States under its auspices.

Application blanks giving complete information will be available through the Commonwealth Fund, 41 East 57th Street, New York; the Pan American Sanitary Bureau, Washington, D. C.; or chiefs of American Missions in Latin America.

THE RICHMOND MEETING SOUTHERN MEDICAL ASSOCIATION

To the Officers, General and of the Sections
To the Officers of Associations meeting conjointly
To the General Chairman, Chairmen and Members of Richmond Committees.

Dear Doctors:

Since the press release by Mr. Joseph B. Eastman, Defense Transportation Director, the latter part of last week we have had letters and long distance telephone calls asking the status of our Richmond meeting. Our leading newspaper gave this press release under a Washington date line in this form: "The government asked Friday that all state and county fairs, non-essential conventions, meetings and group tours, be postponed until the war is over." Note this uses the term "non-essential conventions."

We hold that the Southern Medical Association meeting in November will be an essential convention, that in no sense does it come within the groups mentioned in the press release of Mr. Eastman as quoted above. It is our contention that our meeting can and will be of definite service to the government and to the people in these war times. It can be of service in the mobilization of physicians for war service as was our comparable meeting twenty-five years ago of service to World War I. There are many physicians in our territory who will have to broaden their civilian practice, who will have to do medical work they have not done in years. Our meeting will afford these physicians an opportunity to freshen up and this will mean a better service to the civilian population in these war times.

Until we have something more specific than we have now, until a responsible agency of the government specifically rules that ours is a non-essential convention and will not be entitled to transportation facilities, if transportation is rationed, we are going ahead with plans for a meeting. Just now we are not thinking of the possibility of not having our meeting in Richmond. We feel we should go ahead with perfecting the plans for it will be much easier to call the meeting off on short notice than it will be to get it ready on short notice. Let's be prepared!

C. P. LORANZ, *Secretary-Manager.*

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A NEW SYNDROME OF NOCTURNAL FREQUENCY DUE TO ENDOCRINE IMBALANCE

ROBERT B. GREENBLATT, M.D.
Augusta

Nocturia associated with fibromyomas of the uterus has been thought to be due to pressure on the bladder. Though this fact has been perpetuated both in textbooks and in teaching it may well be fallacious. Such patients complain more of nocturnal frequency than of disturbances of micturition during the day. The routine urinary findings are usually negative or of little significance.

Observations

Of 30 women in this series with large fibromyomas of the uterus, 19 complained of nocturia with or without diurnal frequency. All of these patients had pellets of testosterone propionate implanted subfascially.[1] The dosage varied from 25 to 300 mg., and the number of pellets implanted at one time varied from one to four pellets. It was noted in each one of the 19 patients in question that the nocturnal frequency was wholly or for the greater part alleviated following pellet implantation. In several the symptoms partially or wholly recurred with more or less complete absorption of the pellets. Because of this pertinent observation that pellets of testosterone propionate implanted subfascially ameliorated the disorders of micturition associated with fibromyomas, testosterone propionate was tried parenterally in several women. These patients complained of nocturia or diurnal frequency, or both, urgency, incontinence and no pathologic basis could be found to account for the disturbance. Testosterone propionate used parenterally ameliorated the symptoms.

Case Report

1. L. L., aged 35, an obese colored female, complained of marked nocturia. Though she was disturbed every 15 to 30 minutes during the night, she had no disturbances of micturition during the day. She drank water rather freely. Routine urine analysis revealed nothing unusual. Cystometric studies revealed that she could tolerate a bladder pressure of 22 mm. of mercury and a maximum capacity of 400 cc. of water. Pelvic examination revealed a fibromyoma of the uterus which extended above the level of the umbilicus. Her menstrual periods were regular, of four days duration with moderate pain on the first day. On Oct. 18, 1941, a pellet of 104 mg. of testosterone propionate was implanted subfascially. There was an immediate amelioration of the urinary symptoms and only on occasion was she disturbed so much as once per night. Two months after pellet implantation she volunteered the information that her fluid intake was now greatly reduced because of a slackening of her desire for water. Later on there was a gradual return to increased fluid intake but without any recurrence of the nocturia. The menstrual cycle was in no way disturbed and the dysmenorrhea was but slightly alleviated. On April 9, 1942, she was submitted to laparotomy. The fibromyoma had decreased somewhat in size, for just previous to operation the tumor could be palpated one inch below the level of the umbilicus. During the six month period that she was under observation her blood pressure remained constant. Her weight increased from 231 pounds to 243 pounds. Her libido began to increase considerably about five weeks after pellet implantation and began to subside just before her operation. No evidence of virilization occurred. The pellet was recovered at time of laparotomy and 80 mg. was absorbed over a period of 177 days. Cystometric studies just prior to operation revealed a marked improvement in bladder capacity to 650 cc. and a tolerance of bladder pressure up to 25 mm. of mercury. The remarkable improvement in the nocturnal frequency which persisted throughout the period of observation must be attributed to the testosterone propionate.

Discussion

The alleviation of the syndrome of nocturnal frequency in these patients was due to some specific action of the implanted steroid and cannot be attributed to the minor

From the Department of Experimental Medicine, University of Georgia School of Medicine.
The pellets of testosterone propionate used in this study were supplied by Ciba Pharmaceutical Products, Inc.
Read before the meeting of the Medical Association of Georgia, Augusta, April 29, 1942.

decrease in size of the tumors which frequently occurred. There are many indications that the genito-urinary tract is probably under hormonal influence. This may be adduced from the following facts:

1. One of the first symptoms associated with early pregnancy is a disorder of micturition.

2. In pregnancy, hypertrophy and dilitation of the uterers and other genito-urinary disturbances may occur.

3. In the climacteric urinary frequency, urgency and incontinence are common accompaniments of the menopausal syndrome.

4. Experimental data prove that certain components of the genito-urinary system are under hormonal influence. Castration of the male rat is followed by decrease in weight of the kidneys. This reduction in weight can be prevented by the administration of chemically pure androgenic substance. Selye[2] believes that testosterone exerts a specific action on kidney tissue and histologically such kidneys are characterized by pronounced hypertrophy of the epithelium of the proximal and distal convoluted tubules and of the epithelium lining the parietal lamina of Bowman's capsule. Korenchevsky[3] has claimed that androgens are nephrotrophic, causing increase in weight of kidneys and in size of tubules in both normal and castrate female rats. Mocquot and Moricard[4] have used compounds of testosterone to alleviate the disorders of micturition in menopausal patients. Recently, Salmon et al[5] were able to keep menopausal patients with disorders of micturition symptom free by large doses of estrogenic hormone. These patients appeared refractory to orthodox treatment.

Conclusions

1. Nocturia with or without diurnal distress, for which no pathologic basis can be ascertained, is frequently present in patients with large fibromyoma of the uterus. In the past it has been thought that this syndrome was due to pressure of the fibromyoma on the bladder.
2. Because of the amelioration wholly or partially of this syndrome in every one of 19 patients, it is felt that the belief perpetuated in textbooks and teaching may well be fallacious — that nocturia associated with fibromyomas of the uterus is due to pressure on the bladder. This syndrome is due probably to concomitant endocrine imbalance.
3. Evidence has accumulated that the physiologic processes of the genito-urinary tract may be influenced by various hormones. Androgens are nephrotrophic. Testosterone exerts a specific action on kidney tissue.
4. The reason for the alleviation of certain disorders of micturition following steroid therapy may be a direct sequence to hormonal action either on kidney function, bladder tone, pituitary activity, water balance, electrolyte metabolism or some other mechanism at present not understood.
5. The parenteral use of testosterone propionate in dosages up to 25 mg. per week or the implantation subfascially of pellets of testosterone propionate in dosages 25 to 300 mg. may be expected to ameliorate this syndrome. Masculinizing symptoms have not been observed in any patients of this series.

REFERENCES

1. Greenblatt, R. B., and Wilcox, E. A.: Hormonal Therapy of Fibromyomas of the Uterus, South. Surgeon 10:339 (May) 1941.
2. Selye, H.: On Protective Action of Testosterone Against Kidney-Damaging Effect of Sublimate, J. Pharmacol. & Exper. Therap. 68:454 (April) 1940.
3. Korenchevsky, V., and Ross, M. A.: Kidneys and Sex Hormones, Brit. M. J. 1:645 (April 20) 1940.
4. Mocquot, P., and Moricard, R.: Action de l'hormone male (acetate de testerone) dans les troubles de la castration chez la femme, Bull. Soc. d'obst. et de gynec. 25:791 (Dec.) 1936.
5. Salmon, U. J.; Walter, R. I., and Geist, S. H.: Use of Estrogens in Treatment of Dysuria and Incontinence in Postmenopausal Women, Am. J. Obst. & Gynec. 42:845 (Nov.) 1941.

DIABETES SHOULD BE STRICTLY CONTROLLED

An additional reason why diabetes should be kept under strict control is suggested by a report by James R. Lisa. M.D.; Morton Magiday, M.D.; Irving Galloway, B.S., and James Finlay Hart, M.D., New York, in *The Journal of the American Medical Association* for September 19 that arteriosclerosis or hardening of the arteries is more common in diabetic than in nondiabetic persons. Their findings were based on a postmortem study of 193 diabetic and 2,250 nondiabetic patients.

Among their other findings are that arteriosclerosis is more frequently severe in diabetic than in nondiabetic persons; severe arteriosclerosis is more frequent among persons with diabetics at all ages, and that "sclerotic [hardening] changes in both the diabetic and the nondiabetic person increase in frequency as age advances but among persons with diabetes a given frequency of these changes is reached about ten years earlier than among those without the disease. . . ."

THE INCIDENCE AND MANAGEMENT OF CARCINOMA OF THE PROSTATE GLAND

Edgar G. Ballenger, M.D.
Harld P. McDonald, M.D.
Atlanta

The purpose of this paper is to call your attention to the high incidence of cancer of the prostate and to tell you some recent advances in its management.

Cancer of the prostate occurs more frequently than most doctors suspect. According to studies made by various workers with a large amount of material at their disposal, it occurs more frequently in the male than any other form of cancer.

Moore and Rich made pathologic studies in 521 prostate glands of men over 50 years of age and found cancer present in 16 per cent. Kahler, in studies of over 600 prostate glands of men past 50 years of age, found cancer in 17 per cent. Other investigators have found similar high incidence of prostatic malignancy in elderly men both at autopsy and upon examination of operative specimens. Studies at the Mayo Clinic indicate that cancer is found in 12 to 14 per cent of patients on whom transurethral prostatic resection is done. In our own transurethral resections of 1400 patients prostatic specimens revealed cancer in 162 instances, or in approximately 12 per cent.

These observations lead us to the statement that approximately 15 to 20 per cent or more of all men past 50 years of age who have prostatic obstruction and who neglect this obstruction will have cancer of the prostate gland. That means that about one out of every five men in this room are candidates for prostatic cancer.

Symptoms

The one most dependable symptom of prostatic obstruction is the earliest sign; that is, a lessening of the force of the urinary stream. "The Menace of A Weak Urinary Stream" was published in the Journal of the Medical Association of Georgia by us in 1934. At that time we concluded that the most reliable symptom of obstruction at the vesical neck was a lessening in force of the urinary stream. An editorial by one of us (E. G. B.) in the same publication a year ago again directed attention to the weak urinary stream and called it "Man's Most Neglected Symptom."

Bleeding and pain are prominent though often late symptoms of cancer of the prostate gland. Unfortunately few doctors ask whether there is frequency or urgency or whether the stream is weak or slow to start at times, especially with a full bladder or after a motor trip.

The symptoms of cancerous obstruction appear much faster and over a shorter period of time than benign obstruction. The cancerous prostate may exhibit symptoms for only two or three months, while benign obstructions may give bladder symptoms over a period of years.

Diagnosis

The diagnosis of cancer of the prostate may be made in the majority of instances by palpation of the gland. The nodulation, induration and hardness or fixation to adjacent tissues all are characteristic. In all physical examinations of men 40 years of age or over, the prostate gland should be carefully palpated and if hard areas are felt, prostatic cancer should be suspected and appropriate studies made to rule it out. Biopsy may be made by means of perineal punch, perineal incision or transurethral resection and the diagnosis made by microscopic studies. Emphasis must be placed on the need of careful palpation of the prostate gland on all male patients over 40 years of age and cancer suspected when hard nodulated areas are felt.

Treatment and Management

The cure of any malignant tumor depends on its early diagnosis and its complete removal. Unfortunately, the number of patients suffering from prostatic cancer who are seen early enough for cure by radical removal is small.

Barringer, at Memorial Hospital in New York City, stated that less than 5 per cent of 351 consecutive cases of carcinoma of the prostate were seen early enough to expect cure by radical removal. To date rela-

Read before the Medical Association of Georgia. Augusta, April 29, 1942.

tively few patients with prostatic cancer have been cured by radical surgery.

The management of prostatic carcinoma in the vast majority of cases is, therefore, palliative and the method of treatment that will best prolong life and give the greatest degree of comfort to the patient should be selected.

Bumpus, while at the Mayo Clinic, studied 1,000 cases of prostatic cancer and in 1926 stated that patients lived longer and had less discomfort from suprapubic drainage than any other treatment. This was before transurethral resection became an established procedure.

In our experience, before transurethral resection, we agreed with the conclusions of Bumpus. Since 1931 we have done transurethral resections on all operable prostatic carcinomas. In addition to resection to afford relief from obstruction we have employed x-ray therapy according to a modified Coutard plan. By this plan small daily doses of x-ray, 200 to 250 R, are given for 20 or more treatments. The total dosage is high, usually being from 4,000 to 5,000 R. Thus administered it is better tolerated than x-ray treatments as previously given.

Recent studies on prostatic cancer by Huggins, Stevens, Scott and Hodges, of Chicago, indicate an association of sex hormone secretion with activation of carcinoma of the prostate gland. Their work clearly shows that increase in male sex hormone aggravates the symptoms of prostatic cancer and that reduction in male sex hormone reduces the symptoms of prostatic cancer. This effect of androgenic substance offers a new concept of prostatic cancer. Administration of estrogens was found to counteract the effect of the androgens present and caused the cancer to regress.

It has long been known that removal of the testes before puberty prevented development of the prostate gland. Also, as reported by White in 1893 and Cabot in 1896, surgical removal of the testes was followed by atrophy of the hypertrophied prostate. It is not strange, however, that this method of treating hypertrophy failed to gain favor. For a patient with prostatic cancer there should be no objection to castration if it offers prolonged and more comfortable life. Huggins and his associates in Chicago have reported 21 patients with extensive prostatic carcinoma on whom bilateral orchidectomy was done. They found that all patients gained weight, the red blood count generally increased and that pains in the legs and back from metastases improved remarkably. In addition to the symptomatic improvement the prostate gland underwent prompt regression in all cases but one. These patients have been watched over a period of 18 months and improvement is still being noted. X-ray evidences of bony metastases was noted to regress and in one case a pathologic fracture healed and the metastatic lesions continued to regress during 18 months. Three patients in this series received androgen (testosterone propionate) injections for 12 to 18 days and this was followed by immediate increase in pains in the legs, and evidence of increased activity.

Administration of estrogens then was immediately followed by improvement. Elimination of androgenic substances seems desirable in prostatic cancer. Cancer of the prostate since it arises from prostatic epithelium undergoes atrophy when androgens are withdrawn. This same atrophy tends to occur when estrogen is given.

Counsellor, at the Mayo Clinic, and Munger at Lincoln, Neb., have given sterilizing x-ray therapy to the testicles of patients with prostatic cancer. Munger reported at the American Urological Association meeting in Colorado Springs in 1941 a series so benefited. It is quite possible that improvement in patients attributed to radiation of the prostate is in fact due to a certain amount of radiation of the testes. X-ray castration has seemed less effective and two patients on whom we tried this method developed a marked edema of the scrotum and penis. So far as we know it has not yet been shown that the androgenic function of the testicle is completely eradicated by the so-called x-ray castration.

We believe that surgical castration is the simplest and best way to eliminate the testicular androgenic substances. Following the work of Huggins and his associates we

have performed castration on 12 patients. In addition to castration, estrogen was administered in the form of stilbestrol, 1 mg. daily. Sufficient time has not elapsed to determine the effect on metastatic lesions but all 12 patients have been improved clinically by the castration. In addition to the castration, transurethral resection was done to relieve the obstruction at the vesical neck.

We would like, therefore, to add our endorsement to the castration method of reducing androgens in patients with prostatic cancer. It is hard to believe that prostatic cancer is curable by this method but clinical improvement is satisfactory and life must be prolonged Time will tell its true value.

Finally, in conclusion, let us again emphasize the high incidence of cancer of the prostate. Let us further emphasize the need of palpating the prostate gland in the examination of all men over 40 years of age.

Do not wait for cystitis, hematuria or painful metastases before suspecting cancer of the prostate.

An early and dependable symptom is lessening in force of the urinary stream.

Discussion on Papers of Dr. Greenblatt, Dr. Ballenger and Dr. McDonald

Dr. J. Righton Robertson (Augusta): We are indebted to Dr. Greenblatt for his fine paper on the alleviation of nocturnal urinary frequency, by the administration of the male hormone, testosterone propionate by subfascial implants.

Of the 63 patients studied by Dr. Greenblatt, and in whom the tablets were implanted for various gynecic disorders, over 40 per cent suffered with nocturia, and of these, over half were found to have fibromyomas of the uterus. In nearly all of these cases the nightly urinary frequency was relieved. This fact casts some doubt on the time-honored teaching that the frequency is due to pressure from the tumor.

Before placing the blame for disturbances of micturition on hormone deficiency, we of course will have to rule out, as Dr. Greenblatt has mentioned, cardiovascular-renal disease, anatomic defects in the urinary tract and urinary infection, and also psychogenic factors which are not to be passed over lightly. Another factor not mentioned is the disturbance of micturition, due to allergy. We recently had a patient with a pronounced urinary frequency and symptoms of upper urinary tract obstruction, which after much investigation, turned out to be an allergic condition due to feathers. Allergy as a factor should always be eliminated along with the other common causes of urinary frequency; also tuberculosis of the urinary tract, the most distressing symptom being frequency and dysuria. The fluid intake is of the greatest importance in trying to arrive at the cause of the frequency.

Some very interesting work along this line has been carried on at the Mt. Sinai Hospital in New York City by Dr. Salmon and his associates, who report the successful treatment of women who have passed the menopause, and present a syndrome of urinary frequency, dysuria and incontinence. The symptoms were found to be due to estrogen deficiency, verified by films from vaginal secretion and vaginal biopsy, the examination revealing atrophic vaginitis and erosions of the mucous membrane of the external urinary meatus. This condition being the cause of the urgency frequency and painful urination, the admistration of estrogen hormones relieved the distressing symptoms.

Perhaps in all of the cases presenting the symptoms of urinary frequency, dysuria and incontinence, particularly those patients who are approaching the menopause, it is well to consider the possibility of an estrogenic deficiency of the vagina and urethra as the cause. Also before resorting to surgical measures for the relief of this condition the recognized tests for estrogen deficiency, consisting of the examination of vaginal smears and scrapings from the vaginal mucosa should be made.

It is interesting to note that the syndrome of urinary frequency, dysuria and incontinence seem to be relieved as well by either the male or female sex hormone. The answer might be that the relief is afforded through the stimulative effect of the gonadotropic agents of the anterior pituitary lobe.

Dr. J. Righton Robertson (Augusta): Carcinoma of the prostate is one of our most serious urologic problems and is difficult of early diagnosis, without which there is little hope of cure. It is not only a frequent but is a fatal disease. The life expectancy according to Dr. Keyes, for patients under 50 years, from the first symptoms to complete urinary retention, was six years; four years for those under 60, and two years for those whose first symptoms appear after 60. The incidence of malignancy in our hands is, roughly speaking, around 20 per cent.

In the diagnosis of this condition the rectal digital examination is most important, revealing the stony hardness, the gland being irregular in contour and inelastic and not large as a rule, which fact I think is often misleading to the general practitioner.

Hematuria is not by any means a constant symptom, neither is urinary frequency nor dysuria. Aspiration with a needle is of considerable value in the early diagnosis. Very little knowledge of the condition is obtained by the use of the cystoscope. Although radical operation is advised by many, it is practiced by relatively few; according to Hinman, about 10 per cent. Undoubtedly, it would be the correct procedure if an early diagnosis could be made, but until we can arrive at the time when this can be accomplished, perhaps what the great majority are doing at the present time is best: the transurethral resection of all of the obstructing tissue, which can be done with precision and success by competent and well trained instrumenteurs.

According to Hinman, cancer of the prostate cannot be cured by x-ray therapy and instead of following up our resections with x-ray we have been using diethylstilbestrol with the most gratifying results. Of course, we do not hope to cure our patients of their malignancy by this means, because none is cured. All that we can hope for is to prolong their lives and keep them as comfortable and in as good heart as it is possible for us to do. The use of the estrogenic hormone is of the greatest value, as evidenced by an increase in appetite, with a progressive gain in weight, with an improvement in the blood and hemoglobin, and decrease in the urinary discomfort. We have not as yet done any orchidectomies which eliminate completely the gonadal androgens elaborated by the testes. By the use of estrogenic hormones, "he is able," as Dr. Munger states, "to have his cake and eat it too." There are not many men who are willing to submit to this operation, when we have something in stilbestrol which perhaps answers the same purpose.

In closing I wish to ask Dr. McDonald if he can tell us anything about the value of the phosphatase test as an early indicator of the presence of cancer of the prostate. I also wish to express to him my appreciation of his excellent paper.

Dr. S. Elliott Wilson (Savannah): The work of Dr. Greenblatt is very interesting and holds great promise of relieving this annoying condition of nocturia. I have been treating some such patients with dilataton of the urethra wth poor results and will certainly try his method.

The treatment of carcinoma of the prostate has been discouraging in my experience. In my last ten cases, nine patients died eventually of metastases and none survived a five-year period. These were all seen late in the disease and little hope was held for anything more than the relief of the bladder neck obstruction. Nine were treated by prostatic resection plus deep x-ray therapy. Following Huggins' brilliant work in Chicago on the effect of orchidectomy on carcinoma of the prostate, I saw two patients, both of whom had previous prostatic resection. One was referred to Huggins for orchidectomy but he lived only a year and died from metastases. The other was a patient on whom I did a prostatic resection three years ago. He did well for over two years and then returned complaining of severe pain in one hip. The tissue removed at the resection showed only benign hypertrophy. Examination revealed a malignancy in the prostate which was verified by biopsy. X-ray films showed no evidence of metastases. A chordotomy was done in an attempt to relieve the severe pain. A month later a bilateral orchidectomy was done. He did beautifully for seven months, gaining in weight and feeling well. Three weeks ago he went back to bed with hemorrhages from the bladder and bowel and a recurrence of the pain in the hip. He has not been carefully checked yet but it seems that this case is also a failure. This was one patient that I had hoped to cure. In a recent communication to Huggins he was anxious to recheck the slides of his failures to determine if the type of growth differed in any way from his successes. I sent him slides of one patient but have not heard from him to this date.

The treatment of carcinoma of the prostate can only be improved by an earlier diagnosis and it behooves us as urologists to impress on the general practitioners the necessity of doing a rectal examination on every patient over fifty years of age regardless of symptoms.

Dr. Linton Smith (Atlanta): For several years I have been conducting experiments with a cancer strain of mice and the results that I have gotten closely parallel those that Dr. McDonald has reported in men.

It was only a few hours ago that I was informed of the subject of his paper and I wish that I had known it earlier so that I could have been prepared to furnish accurate data and statistics which would substantiate the claims that I will make.

For almost four years I have been using a strain of mice, all of which die of cancer unless their lives are terminated prematurely. In mice from whom the testicles or the ovaries have been removed when they were quite young cancer never develops, but in controls of equal number, all have died from cancer. Of course this does not include a small number of both groups which died from accidental causes or from some intercurrent disease.

When these mice are newly-born they are laid upon a block of ice and are operated on with no further preparation and only ordinary cleanliness is observed. No anesthetic except the ice is used and sterility is not practiced. The controls are placed on the ice for the same length of time and are otherwise treated identically, so far as is possible except for the castration. After the operation the mice are returned to their mother and no further attention is given them and none is needed.

There is no doubt, in my opinion, that cancer is caused or perhaps activated by certain hormonic substances, and their removal or the prevention of their forming, or their neutralization, prevents the development of the disease, and in the patients reported by Dr. McDonald, the disease seems to have stopped or at least been delayed by removing and neutralizing these substances.

In the mice that I have used, I have prevented the secretion of these substances and I have thereby wholly prevented the development of cancer; while in these old men, Dr. McDonald has stopped the secretion of these same substances and has neutralized them and seems to have obtained cures.

I have ovariectomized three women who had inoperable cancer in other parts of the body and the disease was diminished in virulence but none was cured. The disease was far advanced in all of these cases and a cure could not have been expected, but its progress was certainly slower and the patients lives were definitely prolonged.

This work is being continued for me by a young associate and I hope to continue and to enlarge upon these experiments and it is my intention to extend this work to include mature animals. Some initial success has already been attained in these older animals but none substantial enough to be reported at the present time.

Dr. R. B. Greenblatt (Augusta): The pharmacologic and biologic action of these two hormones is similar in some respects and different in many respects, but one feature is well established—that in physiologic doses they do not neutralize each other.

In the male it seems that in certain urologic conditions the administration of estrogens to neutralize the action of androgens is used. The massive doses used, however, inhibit pituitary activity which in turn inhibits androgenic functon of the testes.

In the female androgens may be used in the palliative therapy of fibromyomas and other endocrine disorders. The administration of testosterone does not neutralize the action of estrogens for cyclic ovarian function is not interfered with. The beneficial action of androgens in the therapy of disorders of micturition in the female is difficult to explain. It may be due to the nephrotrophic action of androgens or to regulation of electrolyte or water metabolism, or perhaps due to positive nitrogen balance that results from continuous androgen therapy. I do not want to imply that this method of pellet implantation is the only method of treatment for this syndrome of nocturnal frequency. It can be obtained by other methods. In women with fibromyomas of the uterus it appears to be the method of choice. The doses recommended are 100 to 300 mg. Such dosage has not been associated with any signs of virilization.

Salmon advocated the use of estrogens for the treatment of dysuria and incontinence in a group of patients who were in the menopausal age. Our group of patients were all under menopausal age except three in the early forties. We, too, have found estrogens of some value in treating such disorders but we feel that chemically pure androgenic substances administered parenterally or orally have proved superior to estrogens. Furthermore, our best results were obtained with pellet implantation.

Dr. H. P. McDonald (Atlanta): In answer to Dr. Robertson's question about serum phosphatase studies in cancer of the prostate some interesting observations have heen made hy Huggins and his co-workers in Chicago, relative to the amount of acid phosphatase found in serum of patients with prostatic cancer. It was found that about 50 per cent of patients without demonstratable hone metastases showed elevation of serum acid phosphatase, but when there was a marked rise of this enzyme cancer and metastatic lesions were invariahly present. These findings are in accord with our own ohservations.

Since the relationship of androgenic hormones to prostatic cancer has been definitely estahlished it is possihle to study effects of withdrawal of these hormones hy studies on the serum acid phosphatase. Such studies made on recent castrates showed decrease of acid phosphatase in practically all instances. In many cases the enzyme level did not reach the normal level or began to rise after a period of nearly normal level. These phenomena are explained by the suggestion of extra gonadal androgenic production. In patients that show this evidence of extra gonadal androgenic production the use of stilbestrol following castration is recommended. This extra gonadal formation of androgenic substance very likely explains why Dr. Wilson's patient improved for a time following castration and then got worse. The use of stilbestrol would likely have been beneficial. It is needless to say that such studies must he continued for sometime before lasting conclusions may be drawn.

CRAWFORD WILLIAMSON LONG (1815-1878)

Thomas J. Collier, M.D.
Atlanta

This being the one hundredth anniversary of the discovery of ether as an anesthetic agent for the relief of pain during surgical operations by Dr. Crawford W. Long at Jefferson, Jackson County, Ga., on March 30, 1842, and being a Georgian myself, and for several years limiting my practice to anesthesiology, I feel honored to be privileged in giving you a brief history of Long and his discovery.

Crawford W. Long was born in Danielsville, Madison County, Georgia, Nov. 1, 1815. His grandfather was Captain Samuel Long, an Irishman by birth, who emigrated to Pennsylvania in 1762, and settled in Carlise, Pa. He married Miss Ann Williamson, of Ulster, Ireland; served in the Army of George Washington, and at the surrender was a captain in the command of the Marquis de LaFayette. After the war in 1792, Samuel Long moved to Madison County, Georgia, taking with him his 11-year old son, James, who had been born and reared in Carlise. This James Long, father of Crawford W. Long, married Miss Elizabeth Ware, a Virginia girl whose parents were born and reared in Albemarle County, Virginia, and had come to Georgia and settled in Madison County in 1788. She was an energetic, warm-hearted ambitious woman of refined taste and much literary ability. Crawford Long's father was a planter and for years was clerk of the Superior Court. He sat in the State Senate for two years.

Crawford W. Long attended the academy in his native town and at the age of 14 entered Franklin College, now the Univer-

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Fig. 1
Long's birthplace, Danielsville, Ga.

sity of Georgia, where he took the degree of Master of Arts in 1835, at the age of 19, being considered "studious and wise" beyond his years and called "The Baby" at the college on account of his youth. He stood second in the graduating class.

Long taught school one year in Danielsville Academy, and after that began the study of medicine at Jefferson, Ga., under Dr. Grant. He then took a medical course of one year at Transylvania University in Lexington, Ky.

In 1837 he entered the medical department of the University of Pennsylvania, which was then, as it is today, one of the leading medical schools of the world. Receiving his degree of M.D. there in 1839, he next went to New York where he spent 18 months, "walking the hospitals" and working with leading medical teachers. He specialized in surgery and saw much suffering result therefrom.

In 1841, when 26 years of age, Dr. Long settled in the little town of Jefferson, Jackson County, Georgia, buying out the practice of his old preceptor, Dr. Grant. He soon acquired a lucrative practice which grew and extended into the neighboring counties and towns of Georgia. His home in the village became the favorite social resort for the young men of the vicinity and it was there that the great discovery was made.

Dr. Long was one of the charter members of the Medical Association of Georgia which was organized in Macon in 1849. In this year he published in the Southern Medical and Surgical Journal an account of his discovery with affidavits of witnesses.

On Aug. 11, 1842, Dr. Long married Miss Carolin Swain, the 16-year old daughter of a planter, George Swain, and a niece of Governor Swain of North Carolina, a lovely and intelligent woman fit in every way to be the life partner of such a man. Mrs. Long died Sept. 22, 1888, at Comfort, Texas, from injuries received in a railroad wreck. She was buried by the side of her husband in Oconee Cemetery at Athens, Ga.

Twelve children were born to this marriage, and six grew to maturity.

It is interesting to note that for one year (1850-1851) Dr. Long lived in Atlanta, but he found it such a crude village and with so little promise that he moved back to the classic city of Athens, Ga., where there were better advantages for educating his children. He continued to reside in Athens until the day of his death, June 16, 1878, after practicing medicine for nearly forty years.

During the War Between the States he was never in active service but was appointed by the Confederate Government to be in charge of the military hospitals on the University campus at Athens. The Southern Cross of honor was conferred upon him by the Daughters of the Confederacy.

It was not until the early chemical discovery of hydrogen, nitrogen, oxygen and nitrous oxide in the latter part of the 18th century that the way was found for scientific anesthesia. Sir Humphrey Davey said in 1800, "Since nitrous oxide is capable of destroying pain it may be used in surgical operations" and 25 years later Henry Hill Hickman anesthetized a puppy and other lower animals with nitrous oxide and carried out many operations successfully upon them without a struggle. These demonstrations went unheeded and the surgical theaters continued to be torture chambers. It was left to Horace Wells, of Hartford, Conn., to put the use of nitrous oxide gas into practice by having his own wisdom tooth drawn while under its influence (1844).



Fig. 2
CRAWFORD WILLIAMSON LONG, M.D.
1815-1878

The knowledge and interest of these drugs reached even to the distant rural hamlets. In one of these, Jefferson, Jackson County, Georgia, many miles from a railroad, Crawford W. Long was plying his profession of medicine. Fresh from the University of Pennsylvania he knew the exhilarating properties of the drug and frequently furnished ether to the young men who met at his office for an "Ether Frolic." In the winter of 1841-1842—but let him tell his story:

"They were so much pleased with its effect that they afterwards frequently used it and induced others to do the same, and the practice soon became quite fashionable in the country, and some of the adjacent counties.

"On numerous occasions I inhaled ether for its exhilarating properties and would frequently, at sometime subsequent to its inhalation, discover bruises or painful spots

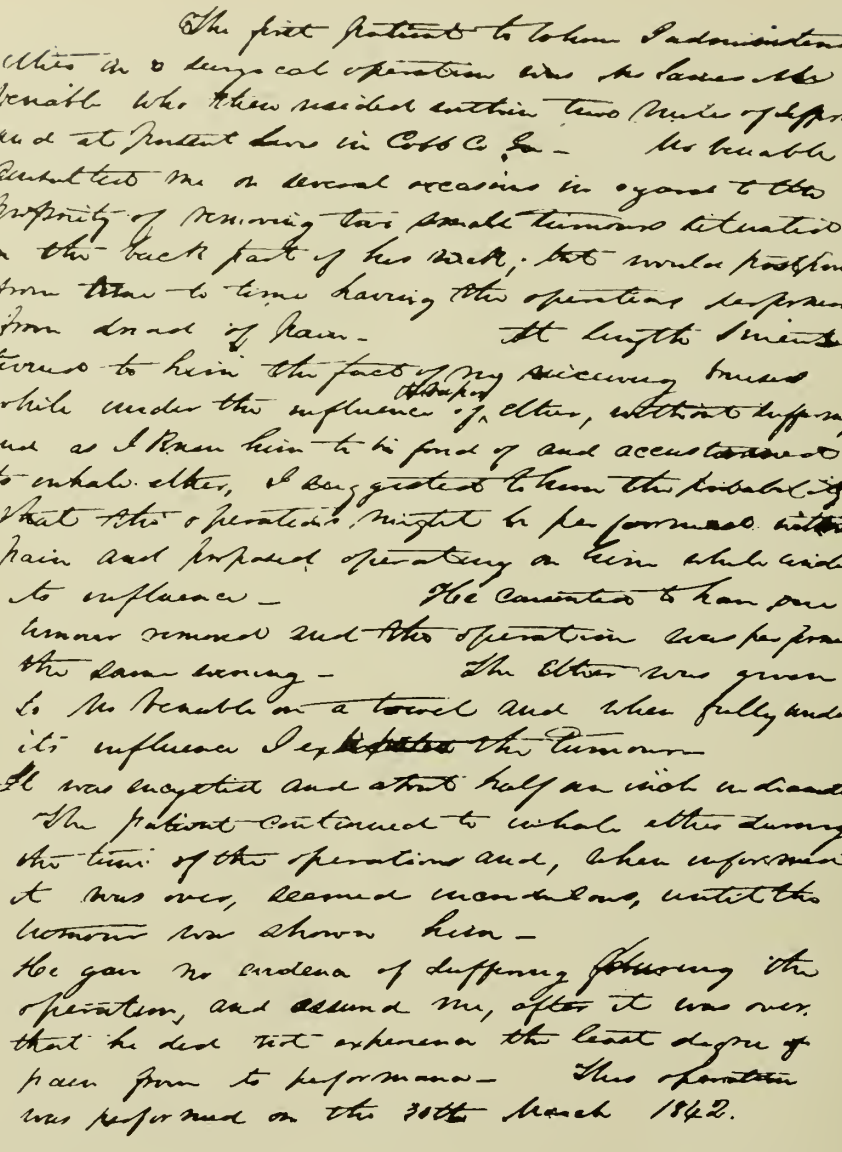


Fig. 3
Long's Atlanta Home, 1850

on my person I had no recollection of causing, and which I felt satisfied were received while under the influence of ether. I noticed my friends while etherized received falls and blows which I believed were sufficient to produce pain, not in such a state of anesthesia, and on questioning them they uniformly assured me they did not feel the least pain from these accidents. Observing these facts, I was led to believe that anesthesia was produced by the inhalation of ether, and that its use would be applicable in surgical operations.

"The first patient to whom I administered ether in a surgical operation was Mr. James M. Venable, who then resided within two miles of Jefferson, and now resides in Cobb County, Ga. Mr. Venable consulted me on several occasions in regard to the propriety of removing two small tumors situated on the back part of his neck, but would postpone from time to time having the operation performed, from dread of pain. At length I mentioned to him the fact of my receiving bruises while under the influence of ether vapor without suffering, and as I knew him to be fond of, and accustomed to, inhaling ether, I suggested to him the probability that the operation might be performed without pain, and proposed operating on him while under its influence. He consented to have one tumor removed, and the operation was performed the same evening. The ether was given Mr. Venable on a towel and when fully under its influence I extirpated the tumor.

"It was encysted and about half an inch in diameter. The patient continued to in-



FACSIMILE OF MANUSCRIPT PAGE OF CRAWFORD WILLIAMSON LONG FROM HIS ADDRESS READ BEFORE THE GEORGIA STATE MEDICAL SOCIETY MARCH 20-21, 1849

hale ether during the time of the operation, and, when informed it was over, seemed incredulous, until the tumor was shown him.

"He gave no evidence of suffering during the operation, and assured me, after it was over, that he did not experience the least degree of pain from its performance. The operation was performed on the 30th day of March, 1842."

"Three similar cases were reported this same year and at least one surgical operation annually thereafter. (Abstracts from Long's original paper read before the Medical Association of Georgia").

I had the privilege of anesthetizing one of Dr. Long's daughters, Mrs. Eugenia Long Harper, who unfortunately received a fracture of the neck of the right femur which was nailed Nov. 14, 1934. She made an uneventful recovery and was able to be up and walking without the aid of even a stick. She was 73 years old when this happened, and died in 1940, some six years after the injury was received.

On April 10, 1910, was the unveiling



Fig. 5
Dr. Crawford W. Long administered ether anesthesia to Mr. James M. Venable at Jefferson, Ga., March 30, 1842, and while the patient was under its influence removed a tumor, without pain, from the back of his neck.

of an imposing granite monument in honor of Dr. Long, presented by Dr. L. G. Hardman to the Jefferson County Medical Society. It stands in the center of the public square facing the spot where the first painless operation in modern surgery was performed.

On March 30, 1912, on the seventieth anniversary of Long's first operation a great celebration was staged at his Alma Mater, the University of Pennsylvania, and there was placed in everenduring bronze in its classic halls a memorial to the great discovery which the youthful Georgian made in little more than three years after his graduation from that institution.

On the afternoon of June 14, 1921, on the occasion of the one hundred and twenty-first commencement exercise of the University of Georgia, a handsome medallion monument in memory of Dr. Long was unveiled on the campus.

On March 30, 1926, in Statuary Hall at our National Capital an enduring effigy of Crawford W. Long was presented to the National Government by the State of Georgia. The statue was carved from marble which came from his native State, Georgia. The money for this purpose was raised by the Crawford Long Memorial Association of which Dr. Frank K. Boland of Atlanta, Ga., was president and who presided at this presentation. The entire



Fig. 6
Long's Statue, Danielsville, Ga.

program of the unveiling and presentation by the State of Georgia can be found in the Congressional Records, pages 7988-7995, April 23, 1926.

On March 30, 1936, a monument in honor of Dr. Long was unveiled on the Courthouse grounds at his birthplace, Danielsville, Ga.

And now in conclusion, I feel it quite fitting to pay tribute to other pioneers in this field of work, who, within the space of only a few years made discoveries also: Horace Wells, a dentist, of Hartford, Conn., in 1844 used nitrous oxide quite extensively in his practice, and Wm. T. G. Morton, of Boston, also a dentist, gave a public demonstration of his discovery of the anesthetic properties of ether at the Massachusetts General Hospital on Oct. 16, 1846, more than four years after Long's use of it in 1842. Sir. J. Y. Simpson, of Edinburgh, who was not satisfied with the disagreeable odor and irritating effect of ether, was carrying on similar experiments when he discovered the anesthetic properties of chloroform on Nov. 4, 1847.

1781 Peachtree St., N. W.

PRIMARY PNEUMOCOCCIC PERITONITIS

Report of Case

W. W. BAXLEY, M.D.
Macon

Primary invasion of the peritoneum by the pneumococcus is uncommon. Until 1930 there had been less than fifty cases reported in this country; since that time numerous cases have been added to this list.

The infection has a predilection for children of the poorer classes between the ages of three and seven years. The incidence is higher in those with kidney infections; about 66 per cent of the cases are in girls.

The channels through which the organism may gain entrance to the peritoneal cavity are through the genital tract in the female, the gastro-intestinal tract, the lymphatics and the blood stream.

Two forms occur: a diffuse, and a localized. It appears that the infection is usually diffuse in the beginning and, if defensive processes develop, it later becomes localized. The pathologic picture is similar to any other suppurative peritonitis. In the early stage there is infection of the peritoneum and in the female the fallopian tubes show a catarrhal inflammation throughout. Following this a turbid serous exudate appears which later turns into milky pus containing flakes of fibrin. The fibrin is abundant and extensive adhesions result. If the patient survives for several days and the infection becomes localized, an abscess of thick creamy pus forms. Otherwise, pus is found throughout the peritoneal cavity.

A mild angina or vulvo-vaginitis may precede by a few days the sudden onset of generalized abdominal pain which is followed by high fever and a rapid pulse. There is nausea with profuse vomiting, persistent diarrhea and in the more fulminating cases blood in the stools. The abdomen is distended and there is moderate generalized tenderness with rigidity, which is less pronounced than in other types of acute peritonitis. If the infection becomes localized the symptoms abate after six or seven days and there is an improvement in the general condition. Usually an abscess forms in one of the lower quadrants, more often in the left. Should the infection remain diffuse the symptoms become more pronounced; prostration with a Hippocratic facies follows and the patient may succumb in a few days.

The sudden onset of symptoms with the absence of localized pain, tenderness and rigidity, the presence of high fever, profuse diarrhea, marked distention and a white blood count of from 20,000 to 40,000, differentiates the condition from peritonitis of an appendiceal or tuberculous origin. In gonococcic peritonitis the gonococcus is usually found in the vaginal secretion. If the pneumococcus is found in the peritoneal fluid obtained from a cul-de-sac or an abdominal puncture, the diagnosis is confirmed.

The mortality in the diffuse form is 80 per cent, in the localized from 10 to 20 per cent.

Two schools of thought on the treatment prevail. Some surgeons advocate early operation with removal of the appendix. However, the majority advise more conservative measures, especially if acute appendicitis can be ruled out. Supportive treatment should begin early. Fowler's position with external heat to the abdomen makes the patient more comfortable and aids in localizing the infection in the lower abdomen. Morphine or codeine should be given for pain and to quiet the intestinal tract. Food and water should be withheld by mouth until the gastro-intestinal symptoms clear up, and intravenous glucose in normal saline or Hartman's solution given in adequate amounts to maintain normal fluid, glucose and chloride levels. Wangenstein's suction applied to a Miller-Abbott or a Levine tube decompresses the gastro-intestinal tract and obviates a paralytic ileus. Blood transfusion combats anemia and replaces the depleted serum proteins. If the organism is found in the peritoneal fluid or from smears taken from the vagina, ears, nose

Read before the Sixth District Medical Society at Milledgeville, June 27, 1940.

and throat, typing should be carried out and specific serum administered. One case is reported in which recovery followed the use of a non-specific immuno-transfusion when other measures had failed; the donor was given graduated doses of typhoid bacilli and at the height of the reaction 300 c.c. of his blood were given the patient. Successful results have been reported in which sulfapyridine was used in conjunction with specific serum. Since its action is dramatic in other pneumococcic infections, its early use is indicated. After the acute symptoms subside any accumulation of pus requires surgical drainage.

Case Report

J. H., a white boy, aged 14, was admitted to Emory University Hospital, Emory University, on April 17, 1938, complaining with pain in the abdomen.

His illness began three days before admission when a boy delivered a fist-blow in the mid-portion of his abdomen. Following this he was nauseated, felt weak and complained of pain at the site of injury. The next day he was nauseated and vomited several times. There was constant pain over the entire abdomen. His temperature was elevated and he felt chilly. The vomiting continued; his abdomen was distended and the day before admission he developed profuse diarrhea. A cough which was present prior to the onset above symptoms continued.

The past medical and family histories were of no importance.

Physical examination showed the patient to be well developed and fairly well nourished but acutely ill. The temperature was 103 F.; the pulse rate was 120; the respiratory rate was 24 and the blood pressure was 105 systolic, 65 diastolic. There was nothing unusual about the head and neck. The heart and lungs were normal. The abdomen was markedly distended. There was moderate generalized tenderness with marked rigidity. No masses or enlarged organs were felt. The percussion note was tympanitic and there were no signs of fluid. The extremities and genitals were normal. Rectal examination showed slight tenderness in the pelvis.

X-ray examination of the chest was normal, that of the abdomen showed marked gaseous distention of the large and small bowels but nothing to suggest a perforated viscus.

The laboratory examination showed the urine to contain 1 plus albumin and occasional pus and red blood cells. The red blood count was 4,400,000; the white blood count was 23,850 with a poly count of 90 per cent. The hemoglobin was 70 per cent. The agglutination test for typhoid fever was negative. Blood cultures were negative. The stools were negative for blood and ameba but an occasional amebic cyst was seen. The blood chloride estimation was 400 mg. per 100 cc. of blood.

No diagnosis was made.

Supportive treatment was started immediately. He was placed in a Fowler's position with hot flaxseed meal poultices to the abdomen. Nothing was given by mouth and a Levine tube was passed through the nose into the stomach to which suction was applied at intervals; 3,000 cc. of fluid were given every 24 hours in the form of 10 per cent glucose in saline, alternating with distilled water. Emetine hydrochloride, gr. ½, was given hypodermically daily for six doses. Codeine sulphate was given in adequate doses for relief of pain.

Daily improvement was noticeable. The temperature was lower each day and it reached normal on the eighth hospital day; from this point there was a secondary rise ranging from 100 to 102 each day. The Levine tube was removed on the fifth day and a liquid diet was given; on the eighth day he was allowed soft food. The distention subsided and he was more comfortable. On the tenth hospital day physical signs of free fluid developed in the lower abdomen. An exploratory abdominal puncture gave a thick creamy pus. Gram positive diplococci were found in both the smear and culture taken from this.

On the twelfth hospital day, under cyclopropane anaesthesia, the abdomen was opened by a right rectus incision. The peritoneum and intestinal serosa were acutely inflamed and covered with a plastic exudate; adhesions were abundant. There was a large abscess in the lower left quadrant which contained thick pus having a definite colon bacillus odor. The pus was removed by suction; two rubber drains were placed in the abscess cavity and brought out through the lower angle of the incision. The appendix was completely walled off and was not disturbed. The abdomen was closed in the usual manner. A transfusion of 500 cc. of citrated blood was given immediately.

Fowler's position with poultices to the abdomen, was resumed. Morphine sulphate was given for pain. Intravenous glucose in saline was given every eight hours for the first three days, and then a liquid diet was permitted. A mild distention was relieved by prostigmin and a rectal tube. Convalescence was uneventful and he was dismissed from the hospital on the twelfth postoperative day. Drainage from the incision persisted for approximately five weeks from the date of operation. Subsequently he developed a hernia through the postoperative scar, which was satisfactorily repaired six months later. The patient, when last seen, two years after his illness was in excellent health.

An attempt has been made to discuss briefly the subject of primary pneumococcic peritonitis and to report a clinical case. The case herein presented brings forth some discussion as to whether trauma played a part or was merely coincidental.

Although this condition is uncommon we should be alert to the possibility of its existence in a patient who presents the signs and symptoms discussed above. Early diagnosis and immediate conservative treatment

will afford the patient a better chance of recovery.

REFERENCES

1. Graham's Surgical Diagnosis.
2. Warbasse & Smyth—Surgical Treatment.
3. Maingot—Postgraduate Surgery.
4. Babcock's—Surgery.
5. Cecil's Medicine.
6. Boyd's Surgical Pathology.
7. Year Book of General Surgery, 1935-1940.
8. Reprints—Pryor Publishing Company.

PERIARTERITIS NODOSA

Report of a Case Diagnosed Antemortem

BERNARD P. WOLFF, M.D.
Atlanta

Like many other diseases periarteritis nodosa undoubtedly occurs much more often than it is recognized. Harris, Lynch and O'Hare[1] in 1939 reviewed the 101 cases which had appeared in the English literature up to that time. Of these only 26 cases were diagnosed antemortem. About 200 case reports have been published in the world literature[2] but only 12 per cent were correctly diagnosed prior to death[3]. As the history is often bizarre and there are no constant physical findings the diagnosis is frequently one of exclusion. Hypertension is present in two-thirds of the cases and when it is associated with an unexplained fever and vague aches and pains the diagnosis of periarteritis nodosa is suggested.

The pathologic change consists of a patchy, diffuse, inflammatory reaction in one or all of the coats of the medium sized arteries and arterioles. As this reaction usually leads to aneurysm, thrombosis or hemorrhage, the clinical picture thus is determined by the location of the arteries most involved. When the damaged arteries are subcutaneous they are usually found and biopsy will lead to a positive diagnosis.

The treatment is symptomatic and the disease is usually terminated by death within a few months.

Report of Case

A policeman, aged 41, was first seen on Feb. 14, 1941, complaining of "high blood pressure." In 1931 his blood pressure was found normal but since 1932 repeated examinations had shown his blood pressure to be elevated.

At the first visit he told of having for two or three weeks a dull substernal aching which was not related to exertion or meals. Palpitation was noticed occasionally but there was no dyspnea, cough or edema. He had nocturia six or eight times, the color of his urine varying from very light to very dark, sometimes with a strong odor. Recently he had had a mild aching in the lumbar region. He perspired very freely.

In 1938 he weighed 237 pounds but through dieting he reduced in eight months to 182 pounds. He was a jolly individual. There was slight puffiness under the eyes and he had a pasty appearance. The pupils reacted normally to light and accommodation. The fundi showed linear hemorrhage and exudate with copper wire vessels. The teeth were carious and tonsils large and cryptic. The heart was enlarged downward and to the left. The aortic second sound was markedly accentuated. Blood pressure was 240 millimeters mercury systolic and 160 diastolic in each arm. There was a moderate amount of brachial and radial arteriosclerosis. The urine showed specific gravity of 1.016, albumin 2 plus, and a few hyaline and brown granular casts. A daily temperature to 99.6 Fahrenheit was noted.

The impression at this time was chronic glomerulonephritis with angina pectoris. An intravenous phenolsulfonphthalein test showed diminished output but the Mosenthal test showed good ability to concentrate. A mild anemia and leukocytosis, with eosinophilia, were present. After a few days' rest in bed with sedatives the pain in the chest cleared up and the blood pressure dropped to 180/120 mm. Hg.

Electrocardiogram revealed marked left ventricular preponderance with inversion of T_1 and T_4. Although his blood pressure remained around 180/120 mm. Hg., the anginal pains returned and the prognosis was considered poor. Early in March, 1941, after an attack of gross hematuria, he was given a thorough urologic study by Dr. Charles Eberhart who was unable to demonstrate any renal lesion other than nephritis.

Blood chemical examinations including nonprotein nitrogen, creatinine, chlorides and glucose were all well within normal limits.

On April 1, 1941, he awoke with sharp pain in the chest which was accompanied by dyspnea, cough and frothy sputum. Examination twelve hours later revealed blood pressure 220/130 mm. Hg., basal rales and a tender, enlarged liver. He was digitalized and improved considerably.

A week later bloody watery stools, with cramping abdominal pains appeared. On April 12, a small nodule was over the spine of the right scapula. This nodule was about 2 cm. in diameter, was nontender and when palpated there was a definite thrill. A bruit was easily heard with the stethoscope. This was obviously a vascular tumor and it was at this point that the diagnosis of periarteritis was made. Biopsy was arranged but before it could be done the patient suffered a coronary occlusion with extensive infarction of the myocardium.

He was admitted to the medical service of Grady Hospital where he rapidly developed congestive heart failure and uremia. He died in a coma on April 21,

(Continued on page 402)

★ THE PRESIDENT'S PAGE ★

GEORGIA DOCTORS

A serious charge is made by a county health officer in Georgia when he states that doctors in his county give three to six "high-powered shots" to Negroes with assurance that they are cured of syphilis. He further states that doctors refuse to use free bismuth which is stacked upon shelves in their offices, consequently their "bismuth needles are rusty." The health officer says doctors are to blame first of all for the turning down of so many Negro draftees due to syphilis.

The minimum standard treatment for syphilis among young people is thirty doses of one of the arsenicals intravenously, and thirty doses of bismuth intramuscularly generally continuously at weekly intervals until ten doses of neo have been given, then switch to bismuth for a like number, thus alternating for about sixty weeks. The time may be cut in half by giving neo and bismuth together if the patient agrees.

Such plan will not cure syphilis in all patients but it will stop the spread of the disease as a rule. Perhaps one-fourth of our private patients should be treated eighteen months to two years.

The five-day treatment, the one-day treatment or the few-hours' treatment should not be attempted yet despite the fact that lay literature has presented to the public interesting stories describing such plans.

I sincerely hope that such complaints are not justified throughout the State. The county health officer spoke concerning his large rural county only where perhaps a dozen doctors practice medicine.

The Emory Medical Post-graduate Clinics present much useful information and deserve better attendance. Part of what was heard in one afternoon is mentioned to emphasize this point.

President-elect W. A. Selman, in discussing postoperative decompression of the intestinal tract, advocates the nasal tube (Levine or Miller-Abbott) to prevent nausea and vomiting. It is used routinely in gallbladder operations. It may be used even following operation on the stomach. He usually inserts the tube the next day after operation. His technic followed for many years is to fill the patient's mouth with crushed ice and gently push the tube as swallowing takes place.

The tube keeps the stomach empty and the patient is allowed to drink water freely. Two bottles, one above head and the other on the floor, rigged up with tubing, clamps, stoppers and a Y will be effective and prove interesting to the patient as he watches the parade to and from the stomach. Five per cent or more glucose is given intravenously.

Dr. Hugh Wood stated that pylorospasm might be due to vitamin B deficiency. He made the helpful statement that the Plummer-Vinson syndrome, an iron deficiency spasm of the esophagus, could be cured by iron and vitamin B. Diabetics are likely to develop vitamin B deficiency. The cheapest source of vitamin B-complex is brewers' yeast, two tablespoonfuls a day.

Dr. Carter Davis talked about obesity and quoted Newburgh as saying that all obesity is exogenous and that hyperglycemia when present in 90 per cent of cases is independent of the obesity and will disappear in the treatment of obesity. Others believe obesity is endogenous (endocrine).

Dr. Davis stated that dinitrophenol is no longer used in treating obesity because it frequently causes cataracts. Diet is the safe treatment.

Dr. L. Minor Blackford was then called on to discuss some practical points in the diagnosis and treatment of heart disease. They were most interesting and I am sure all doctors present took home points that will benefit their patients.

Organized medicine carries on.

J. A. Redfearn, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia
478 Peachtree Street, N. E., Atlanta, Ga.
OCTOBER, 1942

A COMMITMENT

The editorial pages of THE JOURNAL for this month have been dedicated to the 326 boys who failed to enter the sophomore classes of Emory University School of Medicine in the years 1921 to 1942; whose careers were altered and in many instances ruined because they were the victims of a new philosophy in medical education; and to the boys who are students in that school today, as well as to the boys and girls who may hereafter become students in that school.

Medical education and medical practice in Georgia began about the time the first lazaretto was built on the south bank of the Savannah River at the mouth of what is known now as Lazaretto Creek. That lazaretto, or hospital, was named for the leper beggar Lazarus mentioned in the Book of Luke. True, medical education and hospitals have improved since that time, but in some instances medical education now beggars saneness and fairness.

This Journal has always supported the institutions of Georgia and it will continue to do so as long as they serve the public fairly and wholeheartedly: it has supported Emory University School of Medicine. Indeed, the very problem discussed on these pages was discussed with the President of Emory University, and copies of the editorial, "The Strange Policies and Practices of Emory University School of Medicine," were sent to him and to the Chairman of the Board of Trustees of that University in advance of its printing. The President of Emory University has been offered space in these columns if and when he desires to discuss medical education problems.

Whatever may come from the facts here presented or the other facts regarding medical education which will be published in subsequent numbers of THE JOURNAL, improvement both in teaching and in the treatment of medical students at Emory is desired; but there is one sure thing: this Journal never will cease its activities regarding the solution of problems of medical education.

THE STRANGE POLICIES AND PRACTICES OF EMORY UNIVERSITY SCHOOL OF MEDICINE

Emory University School of Medicine had its beginning as the Atlanta Medical College in 1854, in Atlanta, eighteen years after Emory College at Oxford, Ga., was founded. Both the college and the medical school were founded on sound principles dedicated to service to the people of the State of Georgia and of the South, and both were ready in 1915 to become creditable parts of the new Emory University in Atlanta. "Emory's Creed",[1] written by one of her distinguished sons, says in part: "Emory stands for something. A university ought to stand for something besides learning . . . Emory stands for the plain and simple things of human life . . . for truth and that freely. . . ."

Emory University as a whole has progressed favorably, but its medical school has in recent years — in its eagerness to do something which is not understood or subscribed to by many members of its faculty — foregone some of the fine traditions of its founders. Today that medical school functions, and a few members of its full-time faculty think it thrives on a new philosophy regarding medical education and medical practice despite the fact that in 1940 Georgia had 617 fewer doctors of medicine than she had when this new philosophy was put into practice at Emory. To Emory alone can be charged the loss to this State and the country of a sizable number of physicians, all of whom, had they received average fair treatment as students and been permitted to continue their work, could be used now for civilian practice or for medical officers in the armed forces of our beloved country.

Of the 1,349 freshmen medical students admitted to Emory from 1920 to 1941, 326 were not registered in the sophomore classes of that school in the years 1921 to 1942.

Since it is a general rule of medical schools not to permit their students to transfer from one school to another until they have finished their work in the second year, Emory's average annual loss in freshmen for these years has been 24.1 per cent.

NUMBER OF STUDENTS ENROLLED IN THE FRESHMAN AND SOPHOMORE CLASSES OF EMORY UNIVERSITY SCHOOL OF MEDICINE 1920-1942

Session	Freshmen	Sophomores	Percentage of Freshmen not Reaching Sophomore Class*
1920-1921	60*	60	
1921-1922	60	56*	6.7+*
1922-1923	59	48	20.0
1923-1924	56	48	18.7+
1924-1925	62	39	30.4+
1925-1926	55	42	32.3+
1926-1927	63	32	41.9+
1927-1928	55	44	30.2+
1928-1929	64	40	27.3+
1929-1930	57	45	29.7+
1930-1931	63	45	21.1+
1931-1932	61	42	33.3+
1932-1933	61	47	23.0
1933-1934	64	45	26.3+
1934-1935	65	50	21.9+
1935-1936	62	52	20.0
1936-1937	63	42	32.3+
1937-1938	63	51	19.1+
1938-1939	60	51	19.1+
1939-1940	64	51	15.0
1940-1941	64	51	20.4+
1941-1942	68	48	25.0
1942-1943	68	54	20.6+
Totals (23 yrs.)	1417	1083	
Average percentage of freshmen not reaching sophomore class (22 years)			24.1+†

*Computations of percentage made as follows: freshmen of 1920-1921 and sophomores of 1921-1922, with subsequent years in the same order.

†In computing the supply of physicians to be turned out during the next three years (four academic years), the Council on Medical Education and Hospitals of the American Medical Association, in its 1942 report, subtracted 16.2 per cent from the total number of freshmen students in all the medical schools of the country; that is, the number of medical students graduating in 1945 should be 16.2 per cent less than the number of first year students enrolled in 1942.

The actual experience figures of all medical schools of the country for the years 1937-1941, as compiled by the Council on Medical Education and Hospitals of the American Medical Association,[2] showed that 16.2 per cent fewer students graduated in medicine in 1941 than were enrolled in the medical schools in 1937. Emory's average annual loss in freshmen medical students alone exceeds by approximately 49 per cent the average four-year loss of students reported by the medical schools of this country.

This new philosophy about medical education and medical practice was not born in the minds of Emory alumni; it came from elsewhere. And with it came policies and practices which were unknown to the physicians of this State a generation ago. As a matter of fact, these new policies and practices of Emory are just beginning to be known to the physicians of Georgia and other states, many of whom sent their sons to Emory University School of Medicine because they themselves are alumni of that school. At least they sent their sons to Emory if they could persuade the school to accept them as freshmen medical students, a most difficult thing to do at times. Indeed, it has been said of Emory many times that its school of medicine did not desire the sons of physicians for medical students, since such procedure might interfere with the school's new philosophy regarding medical education and medical practice: a philosophy filled with cynicism for the physicians of yesterday, and for many fine men of the school's faculty of today; a philosophy savored with what is commonly known as "state medicine", and a philosophy that all freshmen medical students who do not fit into the scheme of things at Emory be promptly flunked and kicked out of medicine for all time.

Once a student gains entrance to the Medical School at Emory, he soon learns that the school has a Number One Executioner in its anatomy department. Kindness and consideration for the students' health are unknown in this department; cringe methods are used instead. Fear of new things (kainophobia) is forever kept before the students in anatomy, and they are told frequently that their chances of "getting by" are about one out of four. When photographs are made of their class they are reminded each time of their fellow students whose bodies and souls are missing since the first picture was made. Grades are more important to the department than is teaching and are so arranged that one never seems to know just where he stands. Sleight-of-hand so-called practical examina-

tions are given frequently and the students are allowed only thirty seconds to examine a structure and write down an answer to the question, when as a matter of truth every anatomist knows that there are many variations in anatomic structures in different cadavers — as many as twenty-seven in the brachial plexus alone — and that one cannot do justice to any new problem in thirty seconds. Instructors in this department have said that fully 15 per cent of the structures used in the practical examinations are wrong to begin with; yet the students are held to thirty seconds' time for their examination and answer regarding any structure. In other words, a student is *penalized* for something he is not responsible for — for something the instructors themselves cannot agree on!

Written examinations in anatomy are conducted on a similar basis: time is the factor next to proper cringing. A student rarely has sufficient time to think and write down the answers to the questions given. When the time allotted is up, whether it be thirty seconds or so many minutes, the sheets of paper on which are being written the answers are grabbed by the instructors from the students' hands without further ceremony. The papers are graded with vague symbols and are handed back to the students for them to see, but again time is the factor: the students are required to hand their papers back to the department promptly, without ever knowing what grades they made, or what their mistakes were; and no student can ever keep for his intelligence the questions asked. Numerical grades are never given the students in this department.

If the student in anatomy at Emory cringes like a good dog, he is considered to be mentally and psychologically sound to fit in the new order of that institution to become a Doctor of Medicine, and may be permitted to pass. If, however, one should be a little slower than thirty seconds and if he does not "tuck his tail" sufficiently while cringing to the members of this department — *none of whom practices medicine* — he is either conditioned or flunked outright. If he is fortunate enough to be conditioned he is told to go to the University of Michigan and "get off" the condition, at which time he will be considered for admission to the sophomore medical class at Emory. If he is one of those unfortunate boys whose cringing and time-response did not appeal to the Department of Anatomy at Emory, he is kicked out of medicine.

Only in rare instances and after persistent appeals is a flunked medical student permitted to repeat his course. At Emory no provision is made in subsequent classes for such student to repeat his work. He is not encouraged to re-enter the Medical School; indeed, he is discouraged: he and his parents are led to believe that perhaps he does not desire to study medicine; they are told that if he is permitted to repeat the course he will be *penalized* by being required to make a grade higher than that required of his classmates; and, finally, all are told that "state medicine" is coming, with further implication that the medicine of the future may not be bright.

What the medical students who have failed at Emory and their parents are *not* told can be summarized as follows: That Emory's new practices are not in line with those of the other medical schools of this country; that Emory's average annual loss in *freshmen* medical students alone for the past twenty-two years exceeds by approximately 49 per cent the average *four-year* loss of students reported by the medical schools of this country for the years 1937-1941;[2] that, in fact, the average annual loss in freshmen students of all the medical schools of this country for the years 1937, 1938 and 1939 was exactly 10 per cent;[3] that the old academic rule "When a teacher or a department fails more than 10 per cent of any class of students, the teacher and the department he or she represents are in fault and not the student body" is observed and followed by most of the medical schools of this country, but this rule was discarded by Emory; that if the first-year Emory-failed medical students had gone to any other medical school in the United States or Canada, 33 per cent of their number would realize their ambition to become physicians; that of the 326 medical students at Emory who

failed entrance to the sophomore medical classes of that school in the years 1921 to 1942, exactly 107 of them should be doctors of medicine, and probably many more of them could have been salvaged and made good physicians had Emory lived up to her beautiful creed; that Georgia had 617 fewer physicians in 1940 than she had in 1920, and that nearly one-half of the mothers of the State's annual crop of 65,000 babies are without benefit of delivery by physicians and must depend on midwives and other persons to perform such service.

Needless to say, the Emory University School of Medicine of yesterday, with its courtesy, kindness, helpfulness and fairness, served this country well; but the same school of today, with its chicanery in so-called higher education, is unfair to both its students and the public. Surely the time has come when that school should seek the "truth and that freely" about its affairs.

REFERENCES

1. Roberts, Stewart R.: Emory's Creed.
2. Weiskotten, H. G.: Forty-Second Annual Presentation of Educational Data by the Council on Medical Education and Hospitals of the American Medical Association, 1942.
3. Zapffe, Fred C.: Study of the Accomplishment of the 1940-1941 Freshman Class of the Medical Schools of the United States and Canada, J.A.Am.M. Coll. 17:100-107 (March) 1942.

PORTRAITS OF EARLY MEDICAL HEROES PRESENTED TO SURGEONS GENERAL OF ARMY AND NAVY

Portraits of six early Surgeons General of the Army and Navy have recently been presented to the respective medical services of the Army and Navy by Ciba Pharmaceutical Products, Inc., of Summit, New Jersey. The paintings were by Ishmael and the studies of these men who helped to found the medical services of both branches of the medical service were reconstructed from all available early sketches and prints in which the artist was aided by Colonel Harold W. Jones, M.C., librarian, Army Medical Library, Captain Louis H. Roddis, M.C., of the Navy, editor of the Naval Medical Bulletin. Backgrounds for the paintings were suggestive of the exploits of the subjects who were:

William Paul Crillon Barton, the first Chief of the Bureau of Medicine and Surgery of the Navy, 1786-1856.

Jonathan M. Foltz, Chief of the Bureau of Medicine and Surgery and Surgeon General, U. S. Navy, 1810-1877.

Elisha Kent Kane, Medical Officer of the U. S. Navy, 1820-1857.

Charles S. Tripler, Brigadier General, Army Medical Corps, 1806-1866.

Jonathan Letterman, Surgeon Major, U. S. Army, 1824-1872.

Bernard J. D. Irwin, Brigadier General, Army Medical Corps, 1830-1917.

Together, these men form a body of scientific pioneers who helped to establish the medical services of the Army and Navy and make them the great implement for the saving of life they are today. Barton standardized medical supplies, made of the crude sick bay a hospital and was responsible for placing a medical library in each unit. Foltz, known as Surgeon of the Seas because of his wide service, saw the transition of wooden ships to iron ones and forwarded in many ways the Navy in hygiene. Kane headed an expedition into the Arctic to seek a missing brother officer and during that trip added much to our knowledge of the treatment of scurvy. Tripler, of the Army, standardized the selection of recruits and wrote a manual which is still the basis of our standardization of the new Army men. Letterman established the first Ambulance Corps which was tested during the bloody battle of Fredericksburg, and became standard practice in the Union Army. Letterman General Hospital in San Francisco is named in his honor. Irwin, during the battle of Shiloh, organized the first tent hospital which has served as a model for field hospitals ever since. The site of his original hospital is marked with a Government tablet.

The presentation of the portraits of the Navy heroes was made to Rear Admiral Charles M. Oman, M.C., U. S. Navy, at the new National Naval Medical Center at Bethesda, Maryland, where the portraits will be hung in the library for present and future generations of Navy physicians to see. In accepting the portraits from Mr. Jean Jacques Brodbeck, Executive Vice-President and General Manager of Ciba Pharmaceutical Products, Inc., Admiral Oman expressed the appreciation of the Navy Medical Service in the name of the Surgeon General of the Navy and remarked that he hoped that the careers of young medical men who were now coming into the service to fight in the present conflict would be inspired by these portraits to live up to the deeds of these earlier Surgeons General of the Navy.

The presentation of the portraits of the Army Surgeons General was made in the stately old Army Medical Library. Colonel Harold W. Jones, Medical Corps, U. S. Army, accepted them from Mr. Brodbeck on behalf of the Surgeon General of the Army.

"It is fitting on this occasion," he said, "to say a few words concerning the lives of these men, and they may perhaps help to impress upon the present generation the value of contributions to the Medical Department of the Army and to humanity, which were made by these heroes of a long day past."

The Army Medical Library contains many handsome portraits of past officers of the Army Medical Service and these three, presented by Ciba, will be added to the collection.

THREE HEROES OF THE ARMY MEDICAL CORPS

An address delivered by the Librarian of the Army Medical Library, August 25, 1942, in accepting, on behalf of The Surgeon General of the Army, three portraits presented to the Library by the Ciba Pharmaceutical Products Corporation.

HAROLD W. JONES
Colonel, Medical Corps, U. S. Army

In accepting these portraits of Jonathan Letterman, Charles S. Tripler, and Bernard J. D. Irwin, by Mr. Church, on behalf of The Surgeon General of the Army, I desire to express our appreciation of the gift made by the Ciba Corporation to the Army Medical Library. It is fitting on this occasion to say a few words concerning the lives of these men, and they may perhaps help to impress upon the present generation the value of contributions to the Medical Department of the Army and to humanity, which were made by these heroes of a day long past.

Ashburn says in his history of the Medical Department that one of the wise acts of Surgeon General Hammond was his choice of Assistant Surgeon Jonathan Letterman to be Medical Director of the Army of the Potomac. This selection was made on June 19, 1862, just eighty years ago, and it is not too much to say that it marked a turning point in the care of the wounded in warfare.

Letterman proved a genius in the field, and without delay, he introduced system, order and efficiency into the evacuation of the wounded. His scheme of ambulance and field evacuation was studied and much of it was copied by the Army of every civilized nation. Toward the close of the war, Letterman resigned, for he said his work had been completed, the Medical Department was now well organized, and little remained to be done beyond routine duties. It has never been known precisely why Letterman surrendered a great military task in the midst of a bloody war, but the fall of his friend Hammond undoubtedly influenced his action.

Although during his lifetime Letterman was denied the acclaim which came to him long after his death, which occurred at the early age of 48, his fame is great today and his immortality is secure.

Charles S. Tripler, whose fame in the field of Military Medicine was outshone by that of Letterman, nevertheless was a man of great talents, and during his lifetime he was held in the highest esteem. Perhaps his greatest claim to greatness was his production of a system of examination of recruits. The Manual he wrote was known as Tripler's Manual, and in its various editions, it was in use in the Army for scores of years. In my first days in the Service, Tripler's Manual was the Bible of the recruiting service.

General Tripler was born in the early years of the 19th century, graduating at the College of Physicians and Surgeons in New York in 1827. He declined a position in the Honorable East India Company in favor of an appointment to the Medical Staff of the Army.

Tripler was one of the best known medical officers in the Army. He was a great student, an excellent mathematician and a fine linguist. It was said of him that he went twenty-three years at one time without a leave of absence, so devoted was he to his profession. He was self-denying and charitable and with no means but his pay he supported numerous relatives of his own and his wife's for many years without mention of it even to his own family.

Upon General Tripler's death, the Adjutant General of the Army published official notice in general orders praising his work in the Seminole War, the War with Mexico, the Occupation of California, and as Medical Director of the Army of the Potomac. Although the fame of his achievements has passed from the ken of those in the Medical Corps today, his memory is perpetuated by Tripler General Hospital. No satisfactory portrait of his has ever come to our knowledge and the painting accepted today is therefore doubly appreciated.

General Irwin was born in 1830.

At the Battle of Shiloh we have documentary proof that he established the first field tent hospital ever used in war. This attracted the attention of many foreign nations and tent hospitals were soon adopted by the armies of the world. Such things are not long remembered and I doubt if General Irwin has ever received the credit which is due him. He spent many years in the Southwest in Indian campaigns, he even led troops in action and he performed surgical operations in the field under the worst possible conditions.

For distinguished bravery in action against the Indians he received the first Congressional Medal of Honor ever issued. He was a versatile writer and explorer and a geologist as well as a doctor. General Irwin died in his 87th year after a life full of adventures and honors. Seldom is such a career destined for a disciple of Aesculapius.

NEWS ITEM

A recent issue of *The Bulletin* of the University Hospital, Augusta, contained articles by the following members of the staff: Dr. Ralph H. Chaney read a paper, entitled, *The Debt of the Clinician to Research;* Dr. W. H. Goodrich, *Recent Additions and Improvements to the University Hospital;* B. F. Hart and Dr. Richard Torpin, *Stilbestrol in the Toxemias of Late Pregnancy;* and Dr. Richard Torpin, *Abortion Complicated by Tetanus—Report of Two Cases.*

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942

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MY PHILIPPINE EXPERIENCES

Lt. Mary Lucy Moultrie
Army Nurse Corps, Woodbury, Georgia
(Graduate of Columbus City Hospital School of Nursing, Columbus, Georgia)

Without preamble I shall go directly to the subject of this article. Last September, while stationed at Fitzsimmons General Hospital, two fellow nurses and I received orders for foreign service. We were very much excited when we learned that we were sailing on October 4th, from San Francisco, for the Philippine Islands. We were joined in port by 21 other nurses.

Our trip over was passed very pleasantly, with dancing and deck games. Also we were allowed shore leave at Honolulu and Guam. After leaving Hawaii on the last lap of our cruise, complete black-outs were ordered every night. This procedure caused some nervousness among the passengers until the captain explained that it was only a precautionary measure.

Most of our trip was uneventful, with the exception of the occurrence of food poisoning, after leaving Guam. This condition broke out among the enlisted troups. We were quite busy for several days taking care of those affected.

We landed in Manila on the 23rd day of October. Here we were met by Captain Davison, the chief nurse. Here we stayed at Sternberg Hospital for a week before being assigned to stations. Mildred Dalton (a Georgia nurse) and I were sent out to Fort Stotsenberg, located about sixty miles north of Manila.

Fort Stotsenberg was a beautiful place, and we felt quite at home after meeting the hospital staff, and finding our commanding officer to be an old friend from Fort Benning, Georgia.

For six weeks we enjoyed the leisure life of the post. Six hours on duty each day, with the afternoons and evenings free for the enjoyment of sports and dancing. The fort was well equipped with tennis courts, golf course, bowling alleys. Also there was horse-back riding for those who were inclined toward that kind of recreation.

But our life of leisure came to a most abrupt end, with the surprise bombing of Clark Field on December 8th only a few hours after the outrageous attack on Pearl Harbor. This attack had come at noon, and by one o'clock the casualties from Clark Field were pouring in by truck loads. At first there was much confusion and excitement. But doctors and nurses hurriedly gave first aid, and sent the more serious cases directly to the operating room.

All the patients who had been in the hospital at that time, and who were able to do so, gave up their beds to the wounded, and reported back to their companies, or else volunteered to help with the wounded. Some served as stretcher bearers. Others made beds and prepared supplies, while still others sat with and watched the patients who were under the influence of an anesthetic, and checked patients who were getting intravenous injections. Casualties continued to come in all during the afternoon, and until late into the night. The mess cooks made and served soup and coffee to everyone.

Late in the afternoon groups of volunteer workers began blacking out windows and hanging blankets over doors to shut out all lights. Others found and covered lanterns and flashlights, using blue paper for this purpose, for the use of the doctors and nurses. About nine o'clock that night help came from Sternberg Hospital in Manila, several doctors accompanied by five nurses.

Another operating team was formed, and half of the doctors and nurses who had been on duty throughout the day were sent off to bed for a few hours of much needed rest.

During the night all the critical cases had been operated on; and the other cases requiring operation were taken during the day and following night. In a few days the situation was under control, and we were able to get a fairly accurate report of our casualties.

Everything was fairly quiet for several days, with very few wounded coming in from the bombing raids; and we began evacuating our patients to the General Hospital in Manila. Our raid shelters were constructed under the hospital; and all of the nurses and most of the doctors stayed at the hospital. Sometimes there would be as many as eight or ten raids a day; but after the first raid there had been very few

casualties. On December 24th our hospital was evacuated to Manila. Three days later all army personnel were evacuated to Bataan and Corregidor.

I was with a group who reached Bataan about 2:30 A. M. After getting a few hours sleep we were assigned to wards. In my ward there were 20 patients on beds which had been hastily set up during the night. There was no medicine, not even a thermometer, and there was no record of the patients' names. With the help of two of these patients, an American and a Filipino, we made a record of all patients. When the ward officer was assigned he and I, with the help of our up-patients, began to gather supplies. We used coffee cans and pickle jars to hold vaseline, gauze and packing. Our thermometer and hypodermic trays were made from small fruit jars. Drinking cups were tin cans with the tops cut off smoothly.

Patients who could sit up, but who could not get out of bed, folded gauze and produced other supplies. Up-patients helped to serve trays and keep the ward clean. There seemed to be a friendly rivalry among the ward officers and nurses, and even the patients of the different wards, to see who should set up and keep the neatest wards, with the limited supplies on hand.

Then, just as we had succeeded in getting the Limay hospital running smoothly, our fighting men were forced back by the enemy, and we were within range of the artillery fire. Hastily we had to evacuate this hospital. Part of us went to No. 1; and the others to No. 11. And the day after our evacuation the place we lately had occupied was completely destroyed by bombs.

No. 11 hospital consisted of beds set up under the bamboo trees, with a tent for the most serious and critical cases. Water was brought up from the river and heated in large drums for use in the different wards.

And now as the food supplies became diminished more patients began coming in, affected with diarrhea and malaria. Quinine and other medical supplies also gave out. We had only enough quinine to treat the more serious cases of malaria in the hospital, and none at all for follow-up treatment after the patients were discharged. This of course meant recurrent cases coming all the time. Just before the fall of Bataan the number of patients so much increased, we had to take the mattresses off the beds, and put patients on the springs, with a blanket. Another patient would lie on the mattress. Sometimes it was necessary to make a bed for a patient, with a blanket, on the ground. The up-patients helped us to care for the serious cases.

Throughout all of this trying ordeal the boys never lost their spirit, nor gave up hope that help would reach us soon. Even a few hours before the fall of Bataan, when all the nurses were ordered over to Corregidor, they still believed that help would reach us before it was too late.

We were evacuated to Corregidor on the morning of April 9th. It is true that at times we were discouraged. We were living in a nervous tension caused by the constant bombing. Food and medical supplies were short. But all the inconvenience and fearfulness of this would vanish when some American boy would look up at you and say: "You don't know what it means to us to see and talk to an American girl again, after months of service at the front." And with scenes of this character ended my stay on Bataan.

PERIARTERITIS NODOSA

Report of a Case Diagnosed Antemortem

(Continued from page 394)

1941. At postmortem extensive vascular disease was demonstrated in all organs but particularly in the myocardium, kidneys, liver and adrenal glands, there being thromboses of several of the medium sized arteries. The subcutaneous nodule of the right shoulder proved to be a small aneurysm of the right transverse cervical artery. In these organs microscopic examination revealed these thromboses to be on the basis of acute and advanced inflammatory reactions typical of periarteritis nodosum.

Summary

1. A case of hypertension beginning abruptly nine years previously developed changes indicative of extensive vascular damage.
2. With the appearance of a small aneurysm of the right transverse cervical artery these vascular changes were thought due to periarteritis nodosa.
3. Diagnosis was made antemortem.

BIBLIOGRAPHY

1. Harris, A. W.; Lynch, G. W., and O'Hare, J. P.: Periarteritis Nodosa, Arch. Int. Med. 63:1163-1182 (June) 1939.
2. Baker, Lyle A.: Periarteritis Nodosa; With Report of Two Cases, Ann. Int. Med. 22:223-235, 1942.
3. Spiegel, R.: Clinical Aspects of Periarteritis Nodosa, Arch. Int. Med. 8:993-1040, 1963.

NEWS ITEMS

DR. J. R. GARNER, Atlanta, Chief Surgeon of the Atlanta and West Point Rail Road, Western Railway of Alabama, and the Georgia Railroad, was in Chicago during the week of October 5-10 on official business.

THE STAFF meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on October 8. Dr. Linton Smith discussed *Antiseptics, Sutures and Dressings.* Dr. W. L. Thomason is president of the Staff.

THE doctors of Georgia are cordially invited to attend an Educational Cancer Diagnostic and Treatment Conference at the Sheffield Clinic auditorium, Georgia Baptist Hospital, Atlanta, 2:00 to 4:00 P.M. Oct. 23, 1942. Dr. Arthur P. Stout, director of research and professor of surgical pathology, Columbia University School of Medicine, will be guest speaker and conduct the conference.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

TUBERCULOSIS CONTROL IN INDUSTRY

L. M. Petrie, M.D.
Director, Industrial Hygiene Service
Division of Preventable Diseases,
Georgia Department of Public Health
Atlanta

"The time lost annually to industry through illness and disability is appalling. If this time were spent on the job instead of in the hospital or sick room, it would enable us to send down the ways more than 50 new super-dreadnoughts of the North Carolina class—a fleet large enough to protect our shores and also clear the sealanes for any expeditionary forces we choose to dispatch." This is a direct quotation from Paul V. McNutt, who also says that "our primary responsibility, therefore, is to transfer the largest possible proportion of this lost time from the debit to the credit side of the ledger."

Attacks on illness absenteeism problems in war time industries should be concentrated on those illnesses which are actually or potentially of high rank in morbidity and mortality rates, and which also are preventable by proven technics.

Respiratory diseases are the leading cause of absenteeism in industry. Studies by Gafafer indicate that they are responsible for 30 to 40 per cent of the total calendar days lost from illness. Even before the all out war effort was in full stride, as early as 1940, this meant 120 million to 160 million man days' loss from work that year.

Tuberculosis is the most important preventable respiratory disease. It is the leading cause of death in the 15 to 45 year age group in the United States, and is the leading cause of death in all age groups among the preventable infectious diseases. The tuberculosis death rate in the United States rose after our entry into World War I, but has declined steadily since then. Should this downward trend continue for only a few more decades, tuberculosis will be reduced to the position of a minor cause of death in America. However, in 1940 it rose again in nineteen cities in the United States. The importance of these trends is magnified by the skyrocketing rates in Europe.

Furthermore, we may anticipate a rise in the incidence of tuberculosis in our industries if control measures are not prompt and adequate. Military rejectees with active tuberculosis will increase the case load in industry if they are permitted to do so. The United States military services are rejecting all selective service registrants who show evidence of active tuberculosis. To insure the discovery of all cases they are using modern x-ray case-finding technics in their routine physical examinations. They have found that it is not practical to spend billions in compensation for treatment of sickness which could have been prevented at relatively small expense. The compensation payments of the Federal government to veterans for service connected tuberculosis have exceeded one billion dollars. This does not include costs of construction and maintenance of the 12 veterans' tuberculosis hospitals.

In New York State, 0.9 to 1.3 per cent of all selective service registrants have been rejected because of tuberculosis; in Pennsylvania, 2 per cent have been rejected. Those military rejectees who are active cases should not be allowed to swell the tuberculosis case rates in industry. But at least 75 per cent of the early active cases of tuberculosis can be discovered only by x-ray examination.

The purpose of the x-ray examination as of all physical examinations in industry is to assign men to work in accordance with their capabilities and not to exclude them from employment. The rights of the workman to employment must at all times be scrupulously observed except where such employment would endanger the lives of his fellow employees. The employees are entitled, however, to protection from contact transmission of tuberculosis as well as other communicable diseases. All history teaches us that the risks of such diseases increase tremendously in war time, and efforts for this protection should be redoubled.

To find tuberculosis effectively in the most economical manner, the routine physical examination must include chest x-ray study. A photofluorgraphic x-ray unit using 35 mm. films, is a practical device which can be used to screen out suspects at small cost. Several hundred examinations can be made daily with this machine. The Georgia Department of Public Health has portable photofluorgraphic equipment which is available for temporary use in any war industry pending the securing of permanent equipment and personnel by the industry. The industrial medical departments which avail themselves of this service profit also from the free consultation service in interpretation of film readings and fluorgraphic findings.

At the present stage of development, no final diagnoses are made from the miniature films. Suspects are referred for further study by means

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WOMAN'S AUXILIARY : OFFICERS 1942-43

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MRS. HAGGARD'S MESSAGE

Members of the Woman's Auxiliary to the Medical Association of Georgia will read with interest the following excerpts from the acceptance address of Mrs. Frank N. Hagood, of San Antonio, president of the Woman's Auxiliary to the American Medical Association, made at the recent national convention:

"We have in our auxiliary common aims and ideals which have always bound us together. These aims are transcending this year, stretching beyond anything we have known in the past. A world catastrophe has changed our horizon, opened the way for doubts and fears of which we have never before dreamed. We are plainly troubled by the all too apparent dangers which face the medical profession; yet I do not hesitate to predict that we shall stand firm, that the danger will only intensify the need for our closer cohesion. As the homemakers and guardians of the most needed group in the world today—ours is pre-eminently an important role.

"Each day now our husbands are being called into service, either into the armed forces or on civilian duty in the defense areas. They are being called upon to embrace the supreme concept of their most sacred oaths, in sacrifice and endurance. Ours is the task of being worthy of the place we occupy as their wives. That is not as easy as it sounds. We are not accustomed to war. We have had no training in sacrifice. We have never had to be impersonal in the way the fighting army is. As your president, I shall have but one design, a single aim, and that is that we shall be so united, so strong, so forceful that no smallest opportunity for service shall pass us by.

"The first step to that end has been to preserve in every way the program already so well begun. Every member should be a committee of one among lay health groups, exerting our skill in medical health education. Most important is Hygeia, the national health magazine, published by the American Medical Association. Hygeia should be in the public schools, camps, libraries and homes. The Woman's Auxiliary must be prepared to seek and accept leadership in medical defense programs. Our members are cooperating in first aid, nurses' aid, nutrition, ambulance driving, hospital service, diaster relief, communications, care of children, canteen cookery, and transport work.

"Shall we, as women, give an account of ourselves in these trying days in which we may justifiably take pride and for which we may reasonably claim recognition in the adjustment, or shall we be sitting regretfully on the side lines, mute and sorrowful? We do not have a choice. We are needed. Our work is waiting. Our labors may even spell the difference in our national existence. The Woman's Auxiliary has always measured up to whatever task was assigned it, and I have every faith that we shall continue to be proud of our past and confident of our future."

Mrs. Haggard, who twice visited the Georgia Auxiliary, once as president of the Woman's Auxiliary to the Southern Medical Association and once as first vice-president of the national group, has many friends in this State. The former Josephine Whaley, she was born in Arkansas and reared in Texas. Community welfare has always claimed a major part of her interest. Educated at Baylor and the Westmoreland School of Art, Mrs. Haggard is a charter member of her county, state and national auxiliaries and holds a record of having attended every national convention. Appointed a delegate to the White House Conference on Child Health and Protection in 1930, she has worked for child welfare in her State and lent her support to various philanthropies in their behalf. Her husband is a prominent surgeon in San Antonio.

FULTON COUNTY

The Woman's Auxiliary to the Fulton County Medical Society, with approval of the advisory committee, has adopted an excellent plan of War Emergency Service. The members participating in the service will be known as Doctors' Aide Corps. Mrs. Edgar H. Greene is the president of the auxiliary and Mrs. James N. Brawner chairman of the health education committee, sponsors of the program.

The training classes consisted of four lecture periods, after which trainees signed up for one

of the specialized services, radio and speakers' bureau, health films, service groups (cooperating with volunteer agencies in first aid, nutrition, home nursing, nurses' aides) and blood type registry.

At the first lecture period Mrs. Greene, Mrs. Brawner and Dr. H. Cliff Sauls, chairman of the society's advisory committee, outlined the importance of the instruction course, after which talks were given by Dr. Guy Lunsford, of the State Health Department, on "Aims and Facilities of the State Health Department;" by Dr. R. Floyd Payne, director of health for Fulton County on "Fulton County Health Department and Its Services;" and by Dr. J. F. Hackney, assistant director, on "Atlanta Board of Health."

The second lecture period, which featured civic housekeeping, included the following talks, "Water Department of Atlanta, Its Relation to Health," by W. Zode Smith, superintendent; "Sanitation, as It Affects the Health of the City," by H. J. Cates, chief of the Atlanta Sanitary Department; "Disease Bearing Insects and Rodents," by W. H. Edwards of the Atlanta Health Department; and "Nutrition as a National Defense Measure," by Mrs. Turner Smith.

The third lecture, which took up study of the physical fitness program, featured the following talks: "Physical Disabilities Causing Army Rejections," by Dr. Edgar H. Greene, director for the Southeast U. S. Procurement and Assignment Board; "Standard Requirements for School Cafeterias," by Mrs. Berma J. Abercrombie, supervisor Atlanta Public Schools; "Physical Fitness for Adults Through Daily Exercises," by Miss Lucy Marvin Adams, instructor in corrective gymnastics; and "Exercise and Supervised Play for the School Child."

The series of lectures was brought to a close with the regular October Auxiliary meeting, at which Dr. C. M. West, milk chairman for the Fulton County Medical Society, spoke on "Discussion of Milk Supply for Atlanta and Vicinity." The special chairmen for the auxiliary who will carry the excellent program through were introduced. They are Mrs. W. M. Dunn, speakers' bureau for radio and lay groups; Mrs. Eustace Allen and Mrs. Crawford Barnett, cooperation with Red Cross and Civilian Defense Organizations; Mrs. Olin S. Cofer, health films committee; and Mrs. H. Cliff Sauls, blood type registry.

Health Films

Mrs. Leo Smith, of Waycross, chairman of health films for the Woman's Auxiliary to the Medical Association of Georgia, has issued the following message:

"We have found that certain changes need to be made in the Visual Education Program. We are interested in increasing the number of films shown and insuring greater accurary in keeping the records. The changes are as follows:

"1. Each local film chairman will request films direct, either from Dr. C. D. Bowdoin, Director Division of Health Education, Department of Public Health, Atlanta, Georgia, or from your district Councilor, or from the Regional Health Office.

"2. Report all film showings, regardless of where films were obtained, to the Georgia Department of Public Health.

"3. Film showing must be reported within ten days after the showing, or no credit will be given.

"4. Films must be returned not later than two days following the last showing.

"5. The District Managers will show films in unorganized counties.

"The procedure for planning meetings is the same as for last year. Let me urge you to try to arrange your meetings now before the lay organizations complete their year books.

"Nutrition and tuberculosis are again being stressed. We have excellent films on both subjects. Films may also be shown to the various Red Cross classes.

"We realize that the gas rationing will prohibit some of our activity in taking films to out-of-town meetings. However, with so many of our physicians on active duty the need for proper health education is greater than before."

TUBERCULOSIS CONTROL IN INDUSTRY

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of full size x-ray pictures. Clinical study is essential before conclusive diagnosis of disease is confirmed. All patients are referred for treatment to their own physician who has at his command the facilities of the local health department and the State Sanatorium for further study and treatment. At the same time the official and voluntary community health organizations are brought into the picture for epidemiologic studies and further case-finding and control efforts among contacts.

Simple, efficient record keeping is essential to the success of the program. Case records should be confidential, filed in the medical department. Simple cards, adaptable to International Business Machine punch-card analysis have been devised. The services of the central tabulating unit of the State Health Department are being used and are available to industrial medical departments.

The expected savings in absenteeism and production losses resulting from an efficient tuberculosis case-finding and control service are sufficient to justify the purchase of x-ray equipment by larger industries. Chest x-ray study becomes a routine part of their pre-employment and periodic physical examinations. The modern technics make this examination much cheaper and more efficient than routine tuberculin skin testing or any other method of case-finding.

The program benefits the individual case, the employer, the insurance carrier, and the community at large.

1. Individual cases will be discovered early while still curable. Facilities for treatment are available to them through the medical profession in cooperation with the Health Department and the Tuberculosis Association.
2. The plant is saved the absenteeism and production losses not only caused by the illness in the original case, but also similar losses which would otherwise develop from secondary cases.
3. Accident rates and compensation payments are lowered. The healthy individual has fewer accidents.
4. All cases discovered assist greatly the case-finding effort of the community health organizations.

Those war industries which are availing themselves of this service are protecting themselves and their employees from many hundreds of days of potential unnecessary morbidity. The reduction in man-day losses from work and the resulting increased production is a real contribution to our national war effort.

BIBLIOGRAPHY

1. Pendergrass, Warren, and Haagensen: A comparison of Stereoscopic, Miniature Chest Films, Single Roentgenograms on Paper and Single Roentgenograms on Large Films. Industrial Hygiene Foundation of America, Med. Series Bull. No. 5.
2. Tuberculosis-Epidemiology. J.A.M.A. Nov. 9, 1940, Vol. 115, No. 19, page 1609.
3. Tuberculosis Problem in Veterans—Number Men Involved and Cost. J.A.M.A. 1941, Vol. 117, 264.
4. Tuberculosis In the Army. American Review of Tuberculosis, Dec., 1941. Abstract in J.A.M.A. Feb. 21, 1942, page 668.

NEWS ITEMS

THE TENTH DISTRICT MEDICAL SOCIETY and the Georgia Section of the Southeastern Surgical Congress held a clinical conference at the Georgian Hotel, Athens, September 17. Dr. W. W. Brown, Athens, made the *Address of Welcome;* Dr. Edgar D. Shanks, Atlanta, Secretary-Treasurer of the Medical Association of Georgia, the *Response to the Address of Welcome;* Dr. J. A. Redfearn, Albany, President of the Association, spoke on *Forty Million Americans;* Dr. W. A. Selman, Atlanta, President-Elect, *Procurement and Assignment Service;* Dr. Geo. H. Bunch, Columbia, S. C., *Acute Appendicitis —Lantern Slides;* Dr. Robert B. Greenblatt, Augusta, *Management of the Amenorrhagic Patient;* Dr. E. R. Watson, Atlanta, State Board of Health, *Emergency Medical Services — Lantern Slides;* Lt. Commander Matthew N. Hosmer, Medical Corps, U. S. Navy Pre-Flight School, Athens. Dr. T. C. Davison, Atlanta, is chairman of the Georgia Section of the Southeastern Surgical Congress.

DR. LEON E. BRAWNER announces the removal of his offices to Suite 803 Medical Arts Building, 384 Peachtree Street, N. E., Atlanta.

DR. G. LOMBARD KELLY, Augusta, dean of the University of Georgia School of Medicine, announces that the out patient department of the University Hospital will be subsidized by the University and there will be no further charges for clinic cards and medicine.

THE FULTON COUNTY MEDICAL SOCIETY met at the Academy of Medicine, Atlanta, September 21. Dr. Montague L. Boyd spoke on *Kidney Surgery in Kidney Stones,* discussed by Dr. Major F. Fowler and Dr. E. G. Ballenger; Dr. Eugene Stead, professor of medicine, Emory University School of Medicine, *Fainting,* discussed by Dr. C. W. Strickler and Dr. W. A. Smith. Contributors to the September 21 issue of The Bulletin of the Fulton County Medical Society were: Dr. Major F. Fowler, *The Home Front;* Dr. Hal M. Davison, Dr. J. C. Thoroughman and Dr. Harold Bowcock, *Cardiovascular Allergy;* Dr. O. O. Fanning, *Dry Doses.*

THE VISITING STAFF OF GRADY HOSPITAL, Atlanta, met on September 8. Dr. Frederick Cooper presented a patient who had been treated with *Surgical Management of Lung Abscess,* discussed by Dr. R. C. Major. Dr. Alton V. Hallum showed a motion picture of *Dacryocystorhinostomy.*

THE STAFF OF THE GEORGIA BAPTIST HOSPITAL, Atlanta, met on September 15. Dr. Joseph C. Massee is chairman of the Program Committee. Dr. B. L. Shackelford is secretary of the staff.

THE SECOND DISTRICT MEDICAL SOCIETY met at Thomasville on October 8. Dr. J. C. Brim, Pelham, is secretary.

THE UNIVERSITY OF GEORGIA SCHOOL OF MEDICINE announces that its hospital is now prepared to accept a limited number of general medical and surgical patients as State-aid patients, from counties that have no provision for hospitalization of indigents.

DR. THEODORE TOEPEL announces the opening of his office in Suite 407 Grand Theater Building, Atlanta.

DR. L. HARVEY HAMFF announces the opening of offices at Suite 322 Doctors Building, 478 Peachtree St., N. E., Atlanta.

THE STAFF MEETING OF EMORY UNIVERSITY HOSPITAL, Emory University, was held on October 6. Dr. C. W. Strickler, Sr., reported four cases of *Thrombocytopenia Treated with Antivenin;* Dr. E. Van Buren reported a case, *Acute Adrenal Insufficiency.*

THE BIBB COUNTY MEDICAL SOCIETY met on October 6. Dr. Hal M. Davison, Atlanta, spoke on *Cardiac Allergy.*

THE FULTON COUNTY MEDICAL SOCIETY met on October 5. Dr. J. H. Kite read a paper entitled *Familial Osseous Dystrophy or Morquio's Disease;* Dr. D. F. Mullins and Dr. R. Mosteller spoke on *Bilateral Adenocarcinoma of Fallopian Tubes,* discussed by Dr. J. Ross McCain and Dr. Roy R. Kracke; J. G. Williams, D.D.S., read a paper on *Dental Health Needs.* Contributors to the October 5 issue of The Bulletin of the Fulton County Medical Society were: Dr. Major F. Fowler, President of the Society, Dr. Chas. E. Rushin, Dr. J. Calvin Weaver and Dr. Robert B. Logue.

THE GEORGIA STATE NURSES ASSOCIATION and the Private Duty Section; the Georgia League of Nursing

Education; the Georgia State Organization for Public Health Nursing and Industrial Section; and the American Red Cross Nursing Service held their annual conventions conjointly at the Richmond Hotel, Augusta, October 4-7, 1942. Speakers on the program included: Dr. Edwin R. Watson, State Department of Public Health; Miss Durice Dickerson, State Nurse Deputy. *Address of Welcome* by Hon. J. P. Woodall, Mayor of Augusta, and Dr. Claire Henderson, Richmond County Commissioner of Health. *Response to the Address of Welcome* by Miss Carrie M. Spurgeon, vice president, G. S. N. A.; *President's Address*, Miss Frieda Grefe; *Tests and Measurements*, Mrs. R. Louise McManus; *Distribution of Nurses Service*, Miss Alma Haupt; *American Red Cross Nursing Service*, Miss Gertrude Banfield; *Chemical Gas Protection*, Dr. Perry P. Volpitto, Augusta; *Private Duty Nurses Responsibility to War Program*, Miss Alma Haupt; *G. S. O. P. H. N.*, Mrs. John Jenkins, Miss Helen Bean and Miss Olive Whitlock; *Problems, Principles and Practices of Industrial Nurses in Public Health*, Miss Mary Devine, Consultant, Division of Preventable Diseases, State Department of Public Health.

OBITUARY

Dr. Arthur R. Heyward, Warwick; member; Medical College of the State of South Carolina, Charleston, S. C., 1892; aged 72; died on August 3, 1942. He practiced medicine at Warwick for many years before he retired. He had an extensive practice and many friends. Surviving him are his widow, two daughters, Mrs. E. J. Weems, Raleigh, Tenn., and Mrs. J. A. Mathews, Orlando, Fla.; two sons, A. R. Heyward, Jr., Newberry, Fla., and J. G. Heyward, Warwick. Rev. D. W. Filmer and Rev. H. C. Marx officiated at the funeral services conducted at the Warwick Baptist church. Burial was in Smoak cemetery near Warwick.

Dr. Robert Lee Cater, Perry; member; Jefferson Medical College of Philadelphia, Pennsylvania, 1888; aged 76; died on September 16, 1942. He was a native of Houston County and had practiced medicine there since he graduated. Dr. Cater was engaged in extensive farming, leader in civic affairs, was president of the Perry Savings and Loan Association for 28 years and a member of the Methodist church. Surviving him are his widow, two sons, Dr. Duncan Cater, Greensboro, N. C., and T. J. Cater, Perry; two daughters, Mrs. Eliza C. Massee and Miss Katherine Cater, both of Perry. Rev. J. E. Sampley and Rev. M. D. Agerton officiated at the funeral services conducted at the residence. Burial was in Perry cemetery.

Dr. John Thomas Floyd, Atlanta; member; Atlanta College of Physicians and Surgeons, Atlanta, 1905; aged 61; died on September 7, 1942. He was born in Troup County. He served two years in the old Tabernacle Infirmary (now the Georgia Baptist Hospital) as an intern. He practiced gynecology and general surgery and served on the staffs of the Georgia Baptist Hospital, Crawford W. Long Memorial Hospital and Grady Hospital. Dr. Floyd was a member of the Fulton County Medical Society, American Medical Association, and the Baptist church. He served on a number of important committees of the Fulton County Medical Society and was chairman of the Board of Trustees in 1939. Surviving him are his widow, a daughter, Mrs. George Ansley Wilcox, Baltimore, Maryland. Dr. Louie D. Newton and Dr. Robert Burns officiated at the funeral services held at Spring Hill chapel. Burial was in Greenwood cemetery.

Dr. James Walker Curry, Rome; member; Southern Medical College, Atlanta, 1897; aged 67; died July 11, 1942, at his residence following an illness of several years' duration. He was born in Cartersville and in his youth moved with his parents to Rome. After he graduated in medicine he took post-graduate study at the Jefferson Medical College, Philadelphia. He was at one time associated with the late Dr. H. H. Battey in the operation of the Battey Sanatorium, later operated the Curry Hospital. Dr. Curry then moved to Greenville, S. C., where he practiced for several years, then returned to Rome. He was a prominent surgeon and a member of the American College of Surgeons and the American Medical Association. Surviving him are his widow; two sons, J. W. Curry, Lincolnton, N. C., and Denny Curry, Gadsden, Ala. Rev. James L. Duncan officiated at the funeral services conducted at the Daniel & Son Funeral Home. Burial was in Myrtle Hill cemetery.

Dr. Donald F. Smith, Atlanta; member; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1908; aged 67; died on June 23, 1942, as his home. He moved from Stone Mountain to Atlanta thirty years ago and has been engaged as a city health officer since that time. Dr. J. P. Kennedy, city health officer, praised his work in the interest of the poor and indigent sick people of Atlanta. He was a member of the Fulton County Medical Society and the Central Presbyterian church. Surviving him are his widow; four sons, Morris F., J. D., M. C., and W. H. Smith. Rev. Stuart Oglesby officiated at the funeral services conducted at the Peachtree Chapel. Burial was in Stone Mountain cemetery.

DR. CHARLES B. SLADE
1874-1942

New York, Aug. 25—Announcement was made recently of the death, on Sunday, August 23rd, at Greenwood Lake, New York, of Dr. Charles B. Slade. Dr. Slade had a long and brilliant career of public health service, teaching and private practice.

Surviving are his wife, Constance T. Slade, two sons, C. Blount Slade, Jr., Vice President, Brooke, Smith, French & Dorrance, Inc., Detroit; Major William Bonner Slade of Washington, and a daughter, Mrs. George Stevens Carhart of Exeter, N. H.

He will be taken back to Columbus, Ga., where he was born on May 15, 1874, for burial in Linwood Cemetery.

Dr. Slade obtained his undergraduate education at the school founded by his father in Columbus, Ga., where he was a member of the Columbus Guards, and at the University of Georgia, in 1891-92, where he

received first prizes in mathematics and military drill.

He prepared for his professional career at Bellevue Hospital Medical College in New York City where he was ranked at the top of his class and awarded both his M.D. degree in 1896 and a competitive appointment to the Resident Staff at Bellevue Hospital. He completed two years, six months internship at Bellevue Hospital, having made special dissections and illustrations for Doctor Dench's work on Otology in 1897.

After traveling for 2 years through the Western States, Mexico and Europe, he commenced practice of private medicine in New York City in 1900. He had devoted himself to his profession in that city since that time except for a period of 18 months, 1902-1904 spent in Mexico where he organized a medical service for the Mutual Life Insurance Company of New York.

At the University and Bellevue Hospital Medical College he was prosector and demonstrator of anatomy from 1900 through 1902 and Chief of clinic and instructor in general medicine and physical diagnosis and lecturer on life insurance examination from 1905 to 1914.

For several years Dr. Slade was visiting physician in charge of the general medical clinic of DeMilt Dispensary. In 1906 he was appointed as physician to the Department of Health in New York City where he served until 1933. His duties included investigation in the Department and other matters affecting the public health, as well as the position of visiting physician to various hospitals then under the jurisdiction of the Health Department.

In 1906 he established the City's Tuberculosis Sanitarium at Otisville, N. Y., the first municipal sanitarium in the world.

Dr. Slade is the author and illustrator of "Physical Examination and Diagnostic Anatomy" (1910) and "The Establishment and Conduct of a Tuberculosis Sanitarium" (1917) and frequently contributed to professional journals on medicine and public health.

He is a member of the American Medical Society, the Tuberculosis Association and American Sanitarium Association, and the medical societies of New York State, County and City.

He was Past President of the Society of Bellevue Alumni Association and an emeritus member of the Phi Delta Theta Literary and Phi Alpha Sigma Medical Fraternity. He was a member of the New York Southern Society.

During the first World War he served the United States Army examining prospective aviators in the Eastern District of the United States.

Dr. Slade's private and consulting practice in general medicine and especially internal diagnosis and tuberculosis has never been interrupted by his teaching and public health services and he has been called as far as Florida, Minnesota and Canada.

Dr. Slade's first American paternal ancestor was Henry Slade who came from England to Currituck, North Carolina, in 1677. The line of descent is traced through William Slade, a large land holder and planter of Hyde and Martin Counties, N. C., who served as a Lieutenant in the Revolutionary War; his son, Jeremiah Slade, who was a General in the War of 1812, served for 20 years in the North Carolina Legislature and was a founder of the University of North Carolina; his son, Thomas Bog Slade, clergyman and educator who with Bishop Pierce founded Wesleyan Female College, Macon, Ga., the first college for women in the world, and his son, Dr. Slade's father, educator and Major of the Confederate Army, Mayor of Columbus, Ga. (1892-1895) and a member of the Georgia Legislature (1907-1914).

RESOLUTIONS ON THE DEATH OF DR. VICTOR E. KEA

Dr. Victor Emanuel Kea was born May 10, 1890, at Adrian, Georgia. He received his literary education at Dublin High School and South Georgia College at McRae, Ga. He graduated from Emory University School of Medicine in 1918. He joined his class for overseas service but was assigned to duty at Grady Hospital for the duration. For a long time he enjoyed a large general practice but due to ill health he confined his practice mostly to rectal surgery.

Dr. Kea in his late 'teens had a longing to see the world, and so he joined the United States Navy and by so doing he had his heart's desire fulfilled. He entered practically every port of the world while in the Navy.

Dr. Kea loved his profession and took a keen interest in everything pertaining to its welfare.

He had a heart attack and died four weeks later on May 22, 1942. at his home at 625 Houston Mill Road. He is survived by his wife and three sisters.

Therefore, be it resolved by this Society: That we deeply feel the loss of one of our faithful members, and

Be it further resolved: That we extend to Mrs. Kea our sincere sympathy; also that a copy of these resolutions be spread on the minutes of the Society and a copy be sent to Mrs. Kea.

Z. S. COWAN, M.D.
R. M. NELSON, M.D.
O. O. FANNING, M.D., *Chairman.*

PEPTIC ULCER FILM AVAILABLE

There is now available for free showings before groups of physicians the first complete movie film on peptic ulcer, in color and with sound track.

The film is entitled "Peptic Ulcer" and was produced under the direction of the Department of Gastroenterology of the Lahey Clinic of Boston. The American College of Surgeons has awarded its seal of approval to the film.

Running time of the film is 45 minutes, 1600 feet of 16 mm. film. and covers a presentation of the following problems of peptic ulcer: Pathogenesis, diagnosis, treatment, pathology, complications, including obstruction, hemorrhage, and perforation, gastric ulcer, surgery and jejunal ulcer.

Arrangements for a showing of the film may be made by writing to the Professional Service Department of John Wyeth and Brother, Inc., Philadelphia, who will provide projection equipment, screen, film, and operator for medical groups, without charge.

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COMPLICATIONS IN THE MATCHING OF BLOOD FOR TRANSFUSIONS

JOHN FUNKE, M.D.
Atlanta

The undesirable effect of transfusion is the reaction, the origin of which may be in the substance introduced or a contamination of that substance during the introduction.

There are a few reactions which can be traced to the contamination, as products in the apparatus. The apparatus used in the transfusion should be thoroughly washed in tap water, then boiled for 5 or 10 minutes in a solution of 0.1 per cent sodium hydroxide, after which it should be washed in distilled water and finally, to get rid of pyrogens, washed in triple distilled water and then sterilized.

There is a possibility that food products in the donor's serum to which the recipient is allergic may be responsible for a minor reaction. If the donor should be suffering with urticaria at the time of the taking of the blood such a reaction may develop in the recipient.

Allergy probably induces a reaction only rarely but should be borne in mind.

One of our hard and fast rules in taking blood for our plasma bank is the fasting donor.

Too rapid introduction of the fluid into the vein may be responsible for a minor untoward effect.

The dreaded reactions are the results of some incompatibility of the bloods and there are growing possibilities of such incompatibilities.

Slips in the technic of typing of blood are sources of dangerous reactions, although it has happened that as a result of such a slip the recipient of one group received the blood from the donor of another group without any untoward effect but if such an occurrence should be repeated in the same patient in the near future the outcome may not be so happy.

Misplacement of the blood may result in a mixing of the blood of the donors so that the recipient gets the blood of the wrong group.

In the correct typing of the blood it is quite essential to give particular attention to details.

In using a typing serum of a low titer may fail to agglutinate subgroup A_2 or A_2B and the donor may be classed as a B or an O. To cause agglutination of the rather weak agglutinogen A_2 is responsible for such an error. However, at present we do typing with high titered serum so that these subgroups probably give rise to a reaction only now and then. There is a decided possibility that, at least, some of the reactions attributed to subgroups were really due to intragroup reactions. In the tests the red blood cells of subgroup A_1 clump more easily than the red blood cells of A_2, hence the necessity of using typing serum of very high titer. Fortunately, group A_2 is much less common than group A_1, although subgroup A_2B is more frequent in proportion to subgroup A_1B.

Agglutinin $alpha_1$ is more frequent than agglutinin $alpha_2$, the former often acts better at lower temperatures than room or body, but sometimes agglutinin $alpha_2$ acts upon O cells. That brings up the matter of the universal donor which should not be employed. It might be used in subgroup A_1B whose serum is free of agglutinin $alpha_2$ or in subgroup A_1B, whose serum is free of agglutinin $alpha_1$.

The factor which has rather recently

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been accused of severe reactions in patients after the repeat transfusions and in pregnant women is the Rh which is an agglutinogen existing in the red blood cells of 85 per cent of humans. This agglutinogen is antigenic in some individuals, resulting in the production of an anti-Rh antibody which will attack the red blood cells of an individual who is Rh positive.

To elaborate upon that phase, we will assume that an Rh negative individual is transfused with cells from an Rh positive individual: the cells containing the Rh agglutinogen stimulates in the Rh negative recipient the production of anti-Rh antibodies so that, if on a later date, this same recipient receives cells from an Rh positive individual the antibodies attack the cells of the donor and may produce an insignificant or even a mild reaction. In any event more antibodies are produced so that upon the third transfusion in an Rh negative recipient with an Rh positive donor, decided reaction occurs.

The pregnant Rh negative woman may experience her decided or fatal reaction from the initial transfusion. This is explained by the fact that the father is an Rh positive who transmits to the fetus the Rh positive factor. Should cells of the developing fetus transpierce the placenta anti-Rh bodies are formed which may transpierce the placenta in the opposite direction and destroy the cells of the fetus bringing about the erythroblastosis fetalis. Should the pregnant woman get the Rh positive cells by transfusion she will develop the reaction.

Either the fetal cells transpierce the placenta on rare occasions or there is still some other unknown mechanism which prevents or disturbs the process just described for erythroblastosis fetalis should occur more often than it really does.

Closing Discussion of Paper of Dr. John Funke. "Complications in Matching of Blood for Transfusion"

Dr. John Funke (closing): I would first like to differentiate between plasma and serum. They are not synonymous. Serum is a resulting liquid product after the clot has formed. Plasma is the entire liquid substance, minus cellular elements. Plasma is of more value than serum. I am a strong advocate of plasma. In an emergency you want your material in a hurry, and with plasma on hand you may be able to inject the substance in the course of three minutes. Even though you have your types, you have to cross-match. It is not safe to transfuse an A with A and B with B and AB with AB and O with O without cross-matching. That is absolutely essential. As I mentioned awhile ago, we have typed 40 individuals before we found the correct type and then that individual wouldn't match. Plasma is ready. That is, I am speaking of liquid plasma. So far as we are concerned, liquid plasma answers the purpose. We don't ship it and it will keep a longer period of time. It need not be frozen. Dry plasma is more convenient to ship. It can be rejuvenated in a short time. It has its advantages. But in case of emergency in an institution or city, plasma can be taken immediately and disbursed immediately.

In shock, plasma is just as valuable as whole blood. Red blood cells, of course, increase viscosity, but an individual who has a gradual reduction of a count of 2,500,000 can get along very well. If the count is suddenly reduced to half the red blood cells one ought to have, the patient will not get along very well. He may develop shock. He has difficulty because of disparity between blood volume and vascular area and there is nothing in the world that will increase the vascular tone like blood plasma. It will give the heart something upon which to pump and thus get out the sidetracked blood from the large vessels, into the main track.

We are running into one difficulty about the plasma, however. We used to think by pooling our blood, we would suppress all agglutinin. We do in the vast majority of instances, but every now and then we find an individual who has an extraordinary high titer, so all agglutinins are not suppressed by pooling. In the last number of weeks and months we have typed all of our plasma. I want to say suppression of agglutinin occurs more rapidly at room temperature and at 37 than if it is kept at low temperature. It is always better after plasma has been pooled to keep it at room temperature or at 37° C. for several hours, to suppress the agglutinins quickly. If it were possible to put sterile tissue in plasma and take it out again, that would assist in suppression of agglutinin.

In order to avoid the action of the cold agglutinins it is probably better to allow the pooled plasma to first reach room temperature.

FOR SEASICKNESS
NO WIDELY ACCEPTED EXPLANATION YET

A review by W. J. McNally, M.D., and E. A. Stuart, M.D., Montreal, Canada, in the current issue of *War Medicine*, of experimental work on the labyrinth of inner ear in relation to seasickness and other forms of motion sickness fails to bring to light any widely accepted explanation for the cause of the condition or immunity to it. "The labyrinth has been shown by experiment to play an important, probably the most important, part in the causation of the motion sickness," the two physicians explain.

THE BLOOD REGISTRY PLAN OF THE WEST END CIVITAN CLUB ATLANTA, GEORGIA

Chas. K. Howard, M.D.
Atlanta

I appear before you today more as a layman than as a doctor to present to you the plan of typing and registering blood donors which was adopted by the West End Civitan Club of Atlanta.

Our plan is very simple and is in many ways not an entirely new one. For two years we have been typing volunteer donors —members of the club and others in our community—and classifying them according to types 1, 2, 3 and 4 and then filing the records in our registry, which I will shortly demonstrate to you.

Being the only physician in the club, I do the typing in my office free of charge. The club buys the types 2 and 3 serum necessary for the typing at a cost of about $10.00 for each 150 typed. As you know, the only other equipment necessary are a microscope, normal saline solution, microscope slides, etc. The technic is very simple: one who has not typed blood in some time can easily refresh himself quickly on the technic. After prospective donors are typed their records are filed in this manner: (demonstrates file). In this manner, when we receive an emergency call for a transfusion, we can quickly and easily reach a compatible donor. We have all types in our registry. Those of you who have had occasion to need an emergency transfusion for a type 1 or type 3 patient would, I am sure, be delighted to know that you had such a registry as this at your call, when relatives or friends did not match. We have found our registry to be very valuable in our community in saving human lives, but we have not been satisfied with that alone. Realizing its peacetime value already, we have visualized the tremendous value of such a blood registry in every community in case of bombed cities, with the possibility of hundreds of people needing blood transfusions in a short space of time; therefore, we wrote a letter to the President of every Civitan Club throughout the United States, which I will read to you, since it also further explains the purpose of the registry. Read letter No. 1 below.

We received in response to this letter many requests for instructions as to how to start a blood registry. All inquiries were enthusiastic, and anxious to get started.

The letter of instructions mailed to these clubs also further explains the organization of the registry applicable to any organization, and is as follows: Read letter No. 2 below.

Our plan is now to go still further into other organizations and clubs on a statewide and nation-wide basis.

Now, we have several reasons for presenting this plan to this Association.

(1) We need the cooperation and endorsement of the doctors and medical societies to help us in any plan.

(2) We want you to know of the plan because it may help save your life, or the lives of friends or relatives.

(3) It will be valuable to you in your practice to have a registry in your town.

(4) There is a growing belief among the laity that plasma entirely takes the place of blood, and you are needed to correct this impression. As you know, plasma is not whole blood—only serum—and after a severe hemorrhage it is valuable in combating shock, but whole blood is later needed to replace lost corpuscles.

Plasma, although as valuable or more valuable in such conditions as shock, burns and other such conditions unaccompanied by blood loss, still cannot entirely take the place of whole blood in case of severe hemorrhage from any cause, or such conditions as acute hemolytic anemias of the sulfa derivatives, and other acute anemias of varied causes of which you are familiar.

Also, plasma is very expensive, is needed by the Army and Navy in large quantities, and is beyond the reach of many people of moderate or low income.

Our blood registry plan can still be, as you can see, a very valuable help in any community, in war or in peacetime, in

Read before the Medical Association of Georgia, Augusta, April 30, 1942.

spite of plasma, and its valuable addition to our armamentarium.

Donors on our registry, of course, never charge a fee. The registry is not only for charity cases, but for anyone in need for whom a compatible donor cannot be found among friends or relatives.

We think it's a wonderful project, and we ask you to help us in any way possible by endorsement of our plan, or by individual action in your community or town.

Letter No. I

Fellow Civitans:

All of us are anxious to do something for national defense. The West End Civitan Club (Atlanta) is not falling behind. It, too, is on the march through its sponsorship and advocacy of the Blood Register Plan, not only for its peacetime value, but even more for its unlimited value in case of war with its bombed cities, and all the other horrible possibilities of bleeding, suffering, and death. We want your help!

Any sensible and farsighted person realizes *now* the possibility of American cities being bombed. He can quickly see the great help of an organized blood registry in every city to get the right type of blood quickly to those in desperate need. A little work *now* can save many lives *later*. Soldiers are being typed and classified according to their blood types, so that in case of hemorrhage they may receive blood quickly and efficiently. But this is not enough. Modern warfare takes its toll in civilians also. We, too, must be prepared!

The West End Club not only wants Civitans to talk about this plan: it wants them to do something about it, not only in our city but in other cities, in every community throughout the country.

How? you may ask.

Our club will be glad to furnish any club with the information needed to get their organization in full swing.

The procedure is *simple*. Yet even in peacetime the small beginning made by our club through its Blood Registry has already contributed much toward saving life in our community.

Our list of donors who have been typed and who stand ready for any emergency in which transfusions are needed, includes not only club members but many others in our community who have volunteered and are typed and registered.

We feel that this is a wonderful opportunity for Civitan to serve in national defense. Please write for this information and we will gladly furnish it so that you may begin your registry.

Remember this: (In War or Peacetime)

(1) A blood registry may save your life.

(2) It may save the life of a daughter, a son, or other relative.

(3) It may save the lives of many friends or strangers.

(4) It may save you or your company much time wasted in going to hospitals to be typed. When a blood registry exists, only those of the right type need go. It saves *time*, extremely valuable to the patient in need of blood and wasted time for those who are sent and are of the wrong type.

(5) Above all it will give Civitan an opportunity to serve its country and fellowmen, not only in war but in peace.

Get busy on this all important plan.

Get your club started typing its members.

Get your community interested.

Get your local defense corps interested.

Get your nation interested.

Let's not let those damn Japs take any more lives than are absolutely necessary.

Please write and let us help you get started.

Civitanly yours,

Charles Howard, M.D.
840 Gordon Street, S. W.
Atlanta, Georgia
President, West End Civitan Club.

Letter No. II

INSTRUCTIONS FOR ORGANIZING BLOOD REGISTRY

1. Get your club physician or a physician in your community to agree to type blood of all volunteers.

2. Have the club purchase the serum for typing (cost is about $10.00 for each 100 typed). The physician will know how to type the blood, or can easily refresh himself on the technic, since it is simple and requires very little equipment.

3. Provide a card index file to record in order all types, I, II, III, and IV, in separate lists. Then allot each individual a separate card in alphabetical order, stating his full name, his blood type, home and business telephone numbers, etc. In this manner, in case of emergency, the right type can be easily found and the individual cards will give information as to his location, telephone number, etc.

4. Appoint a Chairman of Blood Type Committee to take care of the organization of the registry and to handle calls for those in need of transfusion. He should have a copy of the file, the doctor should have one, and another member, preferably a druggist, should have a third copy.

5. Get volunteers for typing from healthy members of your club, or from any one in your community who will volunteer. Your newspaper will be glad to give you publicity and help you secure volunteers. Approach other clubs, organizations, churches, etc., for volunteers.

6. Be sure and impress everyone of the time-

saving and lifesaving value of the registry in peace as well as in wartime.

7. Impress on them that in case of severe hemorrhage plasma does not take the place of blood—although it is valuable in shock. Whole blood is still invaluable in many cases in spite of plasma (which is *not* whole blood) transfusions. Plasma is also very expensive and in case of severe hemorrhage merely a substitute until whole blood from a donor of the same type can be obtained.

8. Inform your local Civilian Defense Agencies of your plan and of its availability when needed.

Remember Pearl Harbor!

Charles Howard, M.D.
President, West End Civitan Club.
840 Gordon Street, S. W.
Atlanta, Georgia.

Discussion of Paper by Dr. Chas. K. Howard, "The Blood Registry of the West End Civitan Club, Atlanta"

Major Bruce Schaefer, (U. S. Army): I just want to say how much I enjoyed these papers and what a wonderful field was covered. I wish more doctors were here this morning to listen. We all know the Army has typed the blood of all the men and they all have their types on dog tags. Plasma is a wonderful thing and we all realize the value of plasma. As brought out, it does not take the place of whole blood. Only limited amounts of plasma are available. It was estimated that there was a six months' supply of plasma at Pearl Harbor. It was used up in the first 24 hours of bombing. You can see that blood will have to be gotten from other sources. If all doctors will get back of it, it doesn't take much work, with the Red Cross and the Health Departments helping. I think every community should have a registry of blood donors and have them typed.

Dr. Max Mass (Macon): Dr. Howard has exhibited a singular degree of energy and public-spirited accomplishment in his blood registry set-up. I can vouch for its workability and usefulness.

Since the last war the Macon and Middle Georgia hospitals of my city have relied upon just such a registry. The American Legion particularly has been active in keeping our registry files filled. We are making an endeavor to recruit donors from the Central City College (colored) and other social groups. We have managed to fill our requirements entirely by whole blood transfusions from voluntary donors.

Such a system, however, must have tireless supervision. I checked on our registry at random and found 129 white and 25 colored donors. About 30 per cent of these were not immediately available when called on the telephone. Most colored donors are extremely difficult to reach when needed. We have had to rely in a large measure upon relatives of the patients.

I believe that despite the rare occurrence of intragroup incompatibility due to agglutinins unrelated to the common A and B isoagglutinins in the patient's serum, or the occasional "Rh" antigen reactors particularly during pregnancy and in repeated transfusions, the use of whole blood by one who understands the occasional danger will continue to serve an indispensable function.

Dr. Chas. K. Howard (closing): I should like to emphasize the fact I mentioned before, that I am not trying to lowrate plasma. I think I mentioned it in the paper. I realize of course that plasma is an invaluable thing and an exceedingly important discovery that we are depending on to administer, but I still wish to say that there are several reasons why we have to keep giving whole blood transfusions in spite of plasma. I want to say that in plasma hemolytic anemias from sulfanilamide, there was not a loss of blood volume but loss of blood cells and plasma is not going to increase the blood cells.

I want to emphasize again the need of the Army and Navy for large quantities of plasma and the fact that so many people are not able to pay the price for plasma; I don't mean altogether charity cases but patients who have been in the hospital some time and have a large hospital bill and to pay for two or three transfusions would be a load on people with moderate or low incomes.

I wish to emphasize again that our program is only for typing; therefore we don't expect people to go to the hospital and give blood without being cross-matched. The reason we do not do a Kahn's test is because a Kahn's test still wouldn't be any good in giving a blood transfusion two or three months after he was put on the registry. We don't call anybody on our registry within a month after they have given a blood transfusion. We try not to call anyone who has already been several times. Each time a man gives one, we have the date on which the transfusion was given written on his card in the file.

I appreciate the remarks of the two gentlemen who recommended this plan and I certainly hope that it will be spread to other communities because I feel that it would be a very valuable thing. Although plasma is taking the place of blood in cases of shock and mild hemorrhages, and numerous conditions, and, as I said, it is even more valuable, still we have got to give whole blood in a number of cases and I'd like to see this plan spread as much as possible.

The role of the general practitioner in the eradication of tuherculosis cannot be overemphasized. Mass programs of case findings in high schools, colleges, industry and racial groups are public health functions. But there are other caterogies that such drag-nets do not reach. One of these is the older third of the population. They constitute no single group to be rounded up for mass examination. Yet, they contain a higher percentage of infectious cases than any other age. The family doctor alone has direct access to the reservoir of community infection. To drain it effectively and speedly his aid is indispnesable. Editorial, Tuberculosis Abstracts. Nov., 1942.

WHAT EVERY PHYSICIAN SHOULD KNOW ABOUT CROSS-EXAMINATION

MYRON SULZBERGER, JR.
Member of the New York Bar

Physicians are in court almost as frequently as lawyers. It is said that court records in New York City would reveal that suits involving personal injuries constitute about 70 per cent of the litigation. Since each side will have at least one physician, there are at least as many doctors as lawyers in every such case. This situation is not peculiar to New York City; it is reported that it exists throughout the United States. Furthermore, personal injury actions are not the only species of litigation where physicians are required. Doctors testify in goodly numbers in will contests involving insanity, in various criminal trials, such as assault, rape, homicide and the like, and in health, accident and disability insurance cases. All in all, it appears that the physician is quite a "man about court." Wisdom would appear to dictate that physicians should familiarize themselves with the problems of witnesses.

A famous English barrister once said, "There is never a cause contested, the result of which is not mainly dependent upon the skill with which the advocate conducts the cross examination." This statement was made in the days when flowery oratory was in vogue and when it played a very important part in the trial of cases. Today, that form of oratory is passé, and it plays a minor role in litigation. If cross-examination was the decisive factor in litigation in those days, it is doubly true today. Though the quotation set forth here was made to convince lawyers to become proficient in the art of cross-examination, it is equally appropriate for witnesses. This is especially so for physicians because more is expected from the professional expert by the triers of the facts. Any person who takes the stand will make a better and more convincing witness if he becomes familiar with the methods utilized by cross-examiners.

All witnesses are subjected to both direct-examination and cross-examination. Both terms should be defined and explained simultaneously if the process of cross-examination is to be fully appreciated.

Law dictionaries define cross-examination as the examination of a witness by a lawyer who calls the witness to the stand and who first examines him, and they define cross-examination as the examination of such witness by the adverse lawyer, after the conclusion of the direct examination. Webster's Collegiate Dictionary defines "Cross-Examination" thus: "To examine or question, especially as a check to a previous examination."

The true significance of cross-examination and the purpose and utility of the process and the reasons for its effectiveness can be fully appreciated and understood only if it is examined in the setting in which it is used and of which it is an integral feature—the trial of a case in court. Cross-examination is a practical art and it is natural that it fitted and adapted itself to its setting.

The principal feature of this setting, in so far as cross-examination is concerned, is that the direct examiner presents only such evidence, and calls only such witnesses, and asks only such questions as will favor the side of the examining lawyer. The direct examiner will ask for nothing except facts favorable to his own side. The direct examiner does not ask the witness to disclose all that he knows, and the witness does not do so. If the examination of the witness stopped at this point and no attempt was made to find out what else he knows, the testimony would probably present half truths only. The direct examiner does not ask questions that might impair or discredit the story or the witness that he presents to the judge and jury. The factors that might weaken the original testimony or that might lessen the credit of the witness might remain hidden if the examination were to end there. The best person to make the search for what remains hidden, the undisclosed remainder, is the person who is most interested, the opponent. Thus, when the direct examination is concluded the cross-examiner is given an opportunity to complete the picture—to develop and bring to light those facts and circumstances which may have been suppressed on the direct examination. If any facts unfavorable to the direct examiner's case really exist and these are to be learned, the cross-examiner must ferret them out.

The practical effect of all this is that the cross-examiner will probe only for such facts as will be unfavorable to the direct-examiner's case. Since partisan counsel will, between them, endeavor to bring forth all the favorable and unfavorable facts concerning each side, a fair appraisal of the witness and the stories should ultimately result.

Whenever partisans present evidence, it is desirable, before any evidence is accepted as wholly trustworthy, that it be subjected to testing and checking. The test can be effected by subjecting the offered evidence to a scrutiny and analysis calculated to discover and expose, in detail, its possible weaknesses and thus to enable it to be estimated at no more than its actual value. That is the function of a cross-examination and it is called the finest weapon ever invented to discover truth.

The ultimate objective of a cross-examination is to extract from the witnesses whatever may be unfavorable to the direct examiner's case. The unfavorable matter would be of two varieties, (1) facts that support the cross-examiner's con-

tentions, and (2) facts that discredit the witness or the story or that weaken the direct examiner's case.

To extract each unfavorable fact constitutes a separate and distinct objective for the cross-examiner in every case. The nature and character of the unfavorable facts will vary with the case and the witness. The number of possible unfavorable facts is limitless.

An illustration will serve to clarify and explain this statement: A case of assault will be assumed. The sole disputed issue is. "Did defendant shoot plaintiff at 3 A.M. on November 30, 1939, in Grand Central Station?" The plaintiff contends that the defendant did this, and the defendant denies it. Though a single issue exists, it contains three elements: (a) did the defendant shoot the plaintiff, (b) did the shooting occur at the Grand Central Station and (c) did it occur at the time in question. Separate witnesses may be called to prove each element of, or the whole of, this proposition. Witness Roe is called by plaintiff and says that plaintiff and defendant were at Grand Central Station immediately before 3 A.M. on November 30, 1939. The witness is then turned over to the cross-examiner for questioning. The cross-examiner will ask himself: "What facts can be extracted from witness Roe that will be unfavorable to the plaintiff's case?" A very meager list of facts that would tend to support the defendant's proposition, or that would tend to discredit witness Roe, or the statement that plaintiff and defendant were at Grand Central Station at the time specified are these: Roe did not actually see the plaintiff and defendant at the Grand Central Station at the time in question, he simply heard they were there from plaintiff, Roe is a confirmed liar, Roe would not recognize the plaintiff or the defendant if he saw them, his eyesight is very poor, Roe is related to and very friendly with the plaintiff, it was very dark at the time and place in question and Roe could not have seen these men, plaintiff and defendant were very friendly both before and after this occurrence, defendant did not own a weapon, Roe was convicted of numerous crimes including perjury, Roe is very susceptible to suggestion, Roe's statement is improbable in numerous particulars, he had innumerable talks about the matter with plaintiff and his lawyer, that Roe made previous contradictory statements and that he is biased and prejudiced against people like the defendant.

Any or all of these facts would tend to create doubt or disbelief in the proposition being maintained by the plaintiff. The list of unfavorable facts set forth here could be expanded almost ad infinitum.

This illustration should make the distinction between the two varieties of unfavorable facts more apparent. Facts of variety number one (those that support the cross-examiner's contentions) are not intended to impugn or impeach the credit or trustworthiness of the story or the witness. Factual examples of variety number one in this suppositious case are: the plaintiff and defendant were very friendly before and after the time when the shooting is supposed to have occurred and that the defendant never owned a weapon. These two facts do not impeach Roe's trustworthiness or contradict Roe's statement that plaintiff and defendant were at the Grand Central Station at the time specified. These two facts merely lend support to the cross-examiner's contention that the shooting did not occur, on the theory that it is improbable that the defendant shot plaintiff if they were so friendly both before and after the occurrence was supposed to have taken place, and if the defendant never owned a weapon. The search for facts of the second variety is made to induce disbelief, or to destroy confidence or trust in the story or the witness or both.

The art and the skill in conducting an actual cross-examination consists in knowing when to question a witness and in knowing what to extract from each witness and how to do it.

To cross-examine or not to cross-examine, that is the first question. Cross-examination is a double-edged sword. It is a dangerous weapon to use. Before a lawyer commences to question each witness, he wonders, "What hidden facts will the cross-examination reveal? Will these hidden facts strengthen or weaken the case of the cross-examiner? Will they show that the witness is trustworthy or unreliable? Will the cross-examiner develop facts favorable or unfavorable to the cross-examiner's case? Will the answer give the witness a personal victory over the cross-examiner?" The lawyer faces this dilemma before every question is asked on cross-examination unless he knows in advance exactly what answer the witness will give in response to each question. What an enigma for the cross-examiner who is in doubt as to what the witness may know or say or do. "There lies the real danger in cross-examination and there begins the art."

The danger is enhanced by the fact that if a witness is strenuously cross-examined and not impeached in any particular, the story and the witness will be strengthened in the eyes of the triers of the facts, on the assumption, that a witness who is not discredited after a thorough and searching cross-examination must be telling the whole and entire truth. Though the belief is common among witnesses and juries that "a lawyer can do anything with a cross-examination," that he "may make the worse appear the better reason" and that he "may make the truth appear like falsehood," lawyers know that these ideas are wholly without basis or foundation. Cross-examination has been aptly described as a "mental duel" between lawyer and witness. This "duel" often results disastrously for the

lawyer as these illustrations reveal:

An instance is furnished by a surgeon's suit for a substantial fee. "Can you tell me," asked the lawyer, "how long it took to knock off that operation?" "Two hours" replied the surgeon. "The labor of two hours then is that for which you ask $1500?" "No," replied the surgeon, "I ask it for the knowledge of a lifetime." The lawyer asked one question too many in this exchange with a renowned surgeon, and came off second best.

A well known illustration, reported by Wigmore, concerns the famous Lord Coleridge in the case involving a Sister of Mercy, who was expelled for transgression of the rules of the Convent, and therefore commenced suit for libel. Coleridge contended that the breaches of discipline were trivial. He pressed Mrs. Kennedy, "the matron," on the point, asking what Mrs. Saurin had done? Mrs. Kennedy said as an example that she had eaten strawberries. "Eating strawberries!" exclaimed Coleridge, "What harm was there in that?" "It was forbidden, sir" said Mrs. Kennedy—a very proper answer. "But Mrs. Kennedy," reiterated Coleridge, "what trouble was likely to come from eating strawberries?" "Well, sir," replied Mrs. Kennedy, "you might ask what trouble was likely to come from eating apples, yet we know that trouble did come from it." The answer floored Coleridge.

Though art of cross-examination begins with knowing when "to cross-examine or not to cross-examine," it centers around knowing what to extract from each witness so that the direct examiner's case may be weakened, and his witnesses and their testimony discredited, and in knowing how to extract it. So that physicians may more successfully cope with an effective cross-examination, the methods employed by cross-examiners to achieve these ends are for convenience and simplicity being arbitrarily divided into four categories: (1) The vulnerable points of the case; (2) Material for cross-examination; (3) Fixed objectives and (4) The manner of questioning the witness.

1. The cross-examiner constantly hunts for the vulnerable spots in the story and the witness—those vital spots that seem most susceptible to a successful attack. The skilful cross-examiner develops a sixth sense in discovering the vulnerable points in each case. The vulnerable points in a given case may be its most improbable feature or a peculiar trait or characteristic of a witness. The facts in each case, and the make-up of each witness, determine the points of vulnerability in the matter. The physician's records, or the fees said to have been received, or the nature of the treatments administered may reveal angles that will serve as targets for investigation. Similarly, features affecting the witness himself may lead to the place where the attack should be directed—examples of these would be: The witness' memory or his opportunity to observe what he claims he saw or the witness' temper or stubbornness or bias or relationship to a litigant. There is really no limit to the possible number of vulnerable spots that can be selected.

2. While the direct examination unfolds, and while the cross-examination is in progress, the cross-examiner searches for material for cross-examination—the ammunition that the cross-examiner uses for attacking the witness. Whereas the vulnerable spot is the target, the material for the cross-examination is the weapon with which the attack is made. The finest ammunition is a statement, or a writing, that contradicts or is inconsistent with a witness' oral testimony. The search for material that might affect the witness' credit or conreally commences long before the trial. The search is made for everything and anything tentions.

3. An effective cross-examination demands that counsel have definite and fixed objectives in mind while the cross-examination is in progress. However, wherever possible, the cross-examiner keeps these objectives hidden from the witness. It is axiomatic that "the only way to get anywhere is to know where you are going." This is especially appropriate advice for cross-examination. These fixed objectives may be broad or narrow. To discredit a witness or a story may be the mission of the cross-examination or it might consist in being to secure an admission from the witness that he "does not remember what happened on November 30, 1939, at 3 A.M. at Grand Central Station." Each unfavorable fact that counsel might elect to extract can constitute a separate fixed objective for the cross-examiner. To explore generally into a particular subject matter could likewise be an objective. Any end might serve as an objective for the cross-examiner.

4. It is the answer rather than the question that weakens the case or impeaches a witness. It is the answer that either affirms or denies the unfavorable facts that the cross-examiner seeks to extract. The cross-examiner's problem is to persuade the witness to give or to obtain from him the desired answer. The questions are simply the means by which these objectives are attained. Since witnesses do not always easily or willingly disclose the answer that is wanted, a plan of attack (a method of questioning each witness) will be devised that is best calculated to achieve the desired end. The technique of questioning witnesses actually utilized in law courts is based on sound and tested principles of logic, psychology and human nature.

The method of questioning witnesses natural-

ly varies a great deal. The cross-examiner sometimes adopts a rapid fire method of questioning. This is tried to prevent a witness from manufacturing a story as the examination proceeds. The rapidity of questions may force the witness to answer truthfully because he is not given time to create a cohesive fabrication. The psychology of suggestion is another device of the cross-examiner. Here the form of the question is intended to suggest an answer. With a pliable witness, the question may be phrased so as to suggest the desired answer. With a hostile or stubborn witness the question may be so phrased that the desired answer is wholly contradictory to what the witness thinks the cross-examiner wants. Being a contrary-minded person, or an individual who does not want to be led, this witness will disagree with what he thinks the cross-examiner wants—irrespective of whether it is true—on the theory that an answer opposite from what the cross-examiner apparently seeks must be good for the side this witness favors. What may be called the "off-guard technique" is often used with success. There a witness will be asked a series of questions on an apparently immaterial problem, and then a pertinent question will be shot at the witness on the subject about which the cross-examiner is most anxious for information. The witness may be off guard and thus give a truthful reply. With a malingering faker claiming deafness, the cross-examiner may ask the witness as he leaves the stand—when the witness is less alert, believing that the examination is concluded and in a voice too low to be heard by the witness if his claim of defective hearing were true—"Mr. Jones, didn't you forget this piece of paper?" If the witness hears the question, he will probably give an answer. It must be apparent that illustrations of this character could be set forth without limit. Those given are merely intended to give the reader a sketchy idea as to what is meant by the "ways of questioning" a witness.

Though each witness and each case is an individual problem for the cross-examiner, for decades similarities were discerned by experienced cross-examiners both in witnesses and in the factual situations as to which witnesses were questioned. Experience taught the trial lawyer that with witnesses of a similar kind, or with a like factual situation, a reasonably effective cross-examination could be conducted along substantially similar lines. Substantially identical cross-examinations—here called standard patterns of cross-examination—thus developed, and these standard patterns were passed down by lawyers from generation to generation. So long as they worked satisfactorily they were used. When "existing" patterns cease to be effective, lawyers will develop new ones. Where similar witnesses or factual situations occur frequently, the cross-examination for that character of witness or situation becomes quite standardized and routine. The lawyers themselves do not always realize when a given examination is a "standard pattern of cross-examination. Unfortunately and all too frequently, the cross-examiner's "stock in trade" consists of a few "standard patterns" and when these are exhausted without advantage to the cross-examiner, the lawyer feels more beaten than the witness.

Based on these similarities, witnesses and factual situations are classified, typed and catalogued for cross-examination. There are various types and kinds of witnesses, the exaggerator, the child, the expert and the like. Substantial similarities will exist for each of these separate types. The variety of different factual situations is equally numerous. There would be included here the automobile accident, the execution of a will, the making of a contract and any kind of factual situation involved in litigation. Each of these factual situations will have certain things in common. Nothing appearing here is intended to convey the impression that standard patterns of cross-examination are tricks. They are nothing of the kind. The "standard patterns" are sound legitimate methods of cross-examination based on tried and tested principles. No case is ever concluded without some examples of standard patterns of cross-examination. This article will consider those patterns of cross-examination that will confront the physician most frequently.

"Never cross-examine an expert in his own field" is an oft repeated adage. This advice is earnestly followed by skilful lawyers in the examination of physicians. Lawyers thus avoid a cross-examination of the purely medical aspects of the physician's testimony, unless the character of the litigation makes it essential for the lawyer to study and acquaint himself thoroughly with such phases of the case. Physicians must anticipate, therefore, that generally, they will be cross-examined concerning non-medical matters.

Before illustrating standard patterns of cross-examination with typical appropriate examples, a word of general advice to witnesses with respect to the art of answering questions might be in order. Though this advice may appear too obvious, it is amazing how infrequently it is followed. The witness should listen to each and every question carefully and he should think over the question before hazarding an answer. The witness may and should take all the time that may be reasonably necessary to give an answer. No extra points are scored for speed. If the witness does not understand a question he should say so and request that it be repeated. If the meaning of the words are not clear, he should ask for enlightenment. It is better to be known as an ignoramus than a liar. If the witness does not know, or remember the answer, he

should say so. If he is not sure or certain of the answer, he should reply that he believes, or thinks, that the correct answer is so and so, but that he is not sure or certain of it. However, the solution for this, is not for the witness to answer that he does not know or does not remember when he does in fact know, or does in fact remember, for this is a false answer. If a witness was asked, "Did you ever serve a term in Sing Sing prison," the answer "I do not remember" would hardly satisfy.

The witness should answer the specific question asked. This may seem like unnecessary advice but it really is quite important. Each answer should be responsive to the question. If the witness gives an unresponsive answer the jury may believe that he is deliberately attempting to be evasive. Volunteering information not called for may be quite dangerous, and it may serve to give the cross-examiner ammunition to discredit the witness. Many famous cases illustrate how the habit of answering only the question asked, and of avoiding the practice of volunteering information not called for in the question proved extremely helpful to the side that called the witness. A classic illustration of this principle is reported by Reed on "Conduct of Law Suits":

> "Some time ago the writer, while waiting in court, watched the trial of a case where the plaintiff sought to recover damages for a breach of warranty. The defendant had sold him a horse with an express warranty that he was sound and kind and free from all 'outs.' The next day the plaintiff noticed that a shoe was loose, and he undertook to drive him into a blacksmith shop to have him shod, when the horse exhibited such violent reluctance that he was obliged to abandon the attempt. Repeated efforts made it evident that he never would be shod willingly, and therefore he was obliged to sell him. The defendant called two witnesses. The first, an honest, clean looking man, testified that he was a blacksmith, that he knew the horse in question perfectly well, and he had shod him about the time referred to in the plaintiff's testimony. 'Did you have any difficulty in shoeing him?' asked the defendant's counsel. 'Not the least. He stood perfectly quiet. Never had a horse stand quieter.' The other, a venerable-looking man, with a clear, blue eye, testified that he had owned the horse and that he was perfectly kind. 'Did you ever have any trouble about getting him into a blacksmith's shop?' 'Well, sir, I don't remember that I ever had occasion to carry him to a blacksmith's shop while I owned him.'
>
> "The plaintiff's counsel evidently thought that the cross-examination would only develop this unpleasant testimony more strongly, so he let the witnesses go. The jury found for the defendant. The next morning, as the writer was sitting in court waiting for a verdict, a man behind him, whom he recognized as the blacksmith, leaned forward and said, 'You heard that horse case tried yesterday, didn't you? Well, that fellow who tried the case for the plaintiff didn't know how to cross-examine worth a cent. I told him that the horse stood perfectly quiet while I shod him; and so he did. I didn't tell him that I had to hold him by the nose with a pair of pincers to make him stand. The old man said he never took him to a blacksmith's shop while he had him. No more he did. He had to take him out into an open lot and cast him before he could shoe him."

Witnesses should remember that it is not essential to impress the jury that they possess a high I.Q. They should convey the impression that they are honest, fair and trustworthy. This is especially so where the witness is being asked to testify as to facts. Where the witness is called upon to express an opinion, or to act as an expert, the learning, the qualifications and the experience of the witness then become quite relevant.

A few examples of "standard patterns" of cross-examination follow:

1. An investigation as to a physician's qualifications and experience is a "standard pattern" of inquiry. The investigation will ordinarily cover the physician's hospital connections, the phases of medicine in which he specializes, the number of cases similar to the case in suit that he has previously handled, his experience in the field of medicine under inquiry, his familiarity with the medical writings on the subject and all those factors from which a doctor's qualifications and experience are usually measured. The physician's answers should be frank and fair and his qualifications should not be exaggerated or minimized. The witness stand is not the place for self-praise or self-derogation. Each can be ruinous for the physician. An example of what happened to a physician who tried to appear more learned than he actually was is set forth at this point. It involved a suit for disability insurance benefits. Plaintiff claimed total disability as a result of a heart condition—angina pectoris. The insurance company's physician was a heart specialist. Counsel for the plaintiff came to the conclusion that the defendant's physician was inclined to exaggerate; that he was unwilling to admit ignorance on any subject affecting heart disorders. The witness gave the impression of being an unusually pompous individual. Plaintiff's counsel thereupon prepared a list of texts which included two fictitious works. "Harrison on Heart Disease" and "Page on Heart Failure," which were "manufactured" by counsel. The pertinent cross-examination relative to the medical authorities follows:

Q. Are you familiar with the authoritative texts on heart disease?
A. Of course.
Q. I suppose that you have read the authoritative texts and refer to them constantly in your work, correct?
A. I would say that I possess most of them in my own library.
Q. Have you heard of Lewis on Diseases of the Heart?
A. Certainly.
Q. Have you heard of Levine on Clinical Heart Disease?
A. Of course.
Q. These books are standard authorities on the heart?
A. That is correct.
Q. I suppose that there are few books on the heart that are not known to you?
A. I would say that is correct.
Q. Have you heard of P. D. White on Heart Disease and Harrison on Heart Disease?
A. I have.
Q. What about Page on Heart Failure and Anderson on Heart Diseases?
A. Certainly.
Q. Would you say that you have read or examined all the books that I have mentioned?
A. I would say that I not only read them but studied them carefully as well.
Q. Do you know whether any of the books that I have mentioned contain statements contrary to the conclusions that you have made?
A. I do not recall, though I doubt it. If they exist, show the passages to me. You apparently have a number of medical text books on the counsel table.
Q. Do you keep abreast of all current writings on the heart?
A. That's essential in my specialty.
Q. How frequently would you say that you have had occasion to study or refer to the texts that I have mentioned?
A. I refer to them constantly in my practice.
Q. How recently have you done this with respect to the six texts that I have mentioned?
A. My practice compels me to do this constantly, it deals exclusively with the heart.
Q. How many standard texts on the heart do you find it necessary to refer to constantly?
A. That is a foolish question. I refer to the standard texts that you mentioned.
Q. Doctor, I show you this catalogue of medical books and ask you if it is not a fact that Harrison on Heart Disease and Page on Heart Failure, which you stated are standard texts, and which you constantly refer to and study in the course of your practice, are not fictitious and non-existent?
A. No answer.

This physician's trustworthiness and credit were certainly impaired. The impeachment of this witness could have resulted from a conscious design to deceive or from wholly innocent causes. All people, to a degree, are susceptible to the power of suggestion. All persons have had the experience, while conversing with a friend, of being asked "Why you remember David Dantos from back home" and they reply "Oh, of course," or "I think I do," when they don't recall the fellow at all. The witness stand is not the place to be accommodating or careless. It is during cross-examination that the witness must be especially alert and awake and scrutinize and consider each question before answering.

Courts and juries do not expect experts to know everything, and it is unwise for physicians to attempt to give this impression. No person need feel disgraced if he is compelled to say "I do not know," or "I do not remember."

2. A cross-examination concerning doctors' medical records is a very common subject of inquiry. An example of such an examination follows:

Q. Doctor, will you please let me see the medical records to which you referred on direct examination?
A. Shall I, Judge?

Court: Yes, doctor, since you used the records on direct examination, counsel has a right to examine them.

The physician hands the records to counsel who then proceeds to examine them. The cross-examiner hunts for vulnerable spots in the records and searches them for material for cross-examination.

Q. Did you ever know or see this patient or treat him before this case?
A. Never before.
Q. Are these records in your handwriting?
A. Yes, they are.
Q. Now, doctor, weren't these records written up recently and all at one time?
A. Yes, they were. You are 100 per cent correct there. I wrote them up yesterday. I made this copy from my original record because of this court case.
Q. In what respect do your original records differ from or contradict these records?
A. They are identical.
Q. Are they on the same form of card?
A. Exactly the same.
Q. Have you the original records with you?
A. No, I didn't think I needed them and thus did not bring them with me.
Q. Where are the original records now?
A. At my office.
Q. And where is that?
A. Park Avenue, Manhattan.
Q. Why did you bring the copy with you instead of the original?
A. They are both identical. I felt it would suffice.
Q. It is now 2:30 P.M.—how long would it take you

to get the original records and return with them?

A. I haven't got the time to do that.

Q. If my clerk should leave with you now, would it be possible for you to return to your office and give my clerk these original records?

A. I can't waste all day on this case.

Counsel: I ask your Honor to direct Dr. ———— to pick up his original records and to return with them to court this afternoon.

(Colloquy between counsel and the court).

Court: Doctor, since the request for your original records is made, I must ask you to get them and produce them. You will be excused for this purpose.

Witness: Frankly, your Honor, I do not think I could find them. I made these records yesterday intending to bring the original records to court, to leave the original records with the court if it desired them and to retain the copy as my permanent record. I placed the copy in my metal index file and put the original in my wallet pocket. This morning, I looked for the original records and could not find them. I searched for a half hour without success. They must be in my office or at home, somewhere. I suppose I should have admitted this before. I have never lost records before and felt quite embarrassed about it. I should not have tried to bluff my way out of it.

Q. When you tried to bluff your way out of it you knew you were under oath?

A. Yes, I did.

Q. When you stated that you did not bring the original records with you because you did not think you needed them, that was false and untrue, wasn't it, doctor?

A. Well, I suppose it wasn't true but I did feel that the copy would satisfy you.

Q. You originally intended to bring the original to court?

A. Yes, I did.

Q. So you testified falsely when you stated that you did not bring the original record because you did not think you would need it, is that not correct?

A. My answer was untrue.

When a witness takes the stand he swears that he will tell the truth, the whole truth and nothing but the truth. The cross-examiner hopes to catch the witness in a lie on the theory that if the witness lies in one respect the court and jury will believe that he is careless about the truth and that he is the lying kind. Bluff is not recommended. Physicians should always bring their original records to court. To produce copies will only create the impression that the originals are non-existent. This advice should be followed even if the copy is in a more convenient form. If the doctor desires to produce both original and copy, and leave the copy, should the court require it, this can be done. It is a mistake to leave the original at the doctor's home, or office.

A cross-examination as to a physician's records is so frequent an inquiry that a second example is being given. An effective cross-examination in this field is illustrated by a case involving a possibly fractured skull. The physician testified to these injuries: a deep laceration on the hand, a period of unconsciousness (ten minutes), bleeding from the nose and ears, nausea and headache. These are what the physician found on the first visit. X-rays of the skull were taken in various positions. The pictures were negative. The doctor's diagnosis was a fractured skull. The doctor kept the patient in bed for three weeks.

After the doctor's records were turned over to counsel, the cross-examination proceeded in this manner:

Q. Notwithstanding the x-ray you persist in your diagnosis of fractured skull?

A. Yes, a fracture of the base of the skull. The x-ray is not conclusive. To me the findings are more impressive.

Q. Without what signs and conditions would you not have made diagnosis of fractured skull?

A. All the things I found are important. I am not sure that I quite follow you.

Q. If the plaintiff had not suffered from headaches and nausea when you first examined him, would you have made a diagnosis of fractured skull?

A. He was suffering from these and told me so.

Q. I repeat, if you did not find the plantiff suffering from headache and nausea, you would not have made that diagnosis, is that correct?

A. Without nausea, I still may have, in view of the other findings; without head pains, no.

Q. Without bleeding from the nose and ears, would you have made that diagnosis?

A. Without bleeding from the nose, yes. Without bleeding from the ears, no.

Q. If there was no bleeding from the ears you could not have made a diagnosis of fractured skull in this case?

A. That is absolutely correct.

A series of questions were then asked the doctor to divert his attention from the subject of bleeding from the ears.

Q. Have you an independent recollection of what you saw the plantiff suffering from and what he told you, or is this case just like a thousand others and do you only remember what the patient had because of your records?

A. I remember this case very well.

Q. Do you remember asking your patient questions and summarizing on this card what you were told and what you found?

A. I put down what was important.

Q. You remember doing that in this case?

A. Yes.

Counsel now picks up the card, and while looking at it, asks these questions:

Q. You were told that the injuries resulted from falling plaster and you made a record as to that, correct?
A. Correct.
Q. Falling plaster could have caused a bloody nose?
A. There was no mark on the nose.
Q. You do not say there was no mark on the nose in this record, doctor?
A. Where there is no mark or injury to a part, I make no record as to that. I made no entry that there were no marks or injuries to the man's legs or toes, either.
Q. Since you knew this injury would result in a lawsuit, you were especially careful in the making of records, were you not?
A. I was primarily concerned with curing the patient, not winning a lawsuit.
Q. You knew there might be a lawsuit?
A. I did not think about it.
Q. You made a record of how the injuries occurred and all the injuries that you found and observed?
A. I always do that, accident or no accident.
Q. And you did that in this case?
A. I did.

Counsel continues to examine card as he questions the witness.

Q. You were told about headaches and you put that down?
A. Correct.
Q. Plaintiff told you about nausea and you put that down?
A. That's right.
Q. You saw a deep laceration on the skull and you recorded that on this card?
A. I put down everything I saw that was important.
Q. You saw bleeding from the ears and you made a note as to that on this card?
A. I did.
Q. Doctor, you have an independent recollection of writing down all these things?
A. Of course.
Q. Do you recall whether you wrote the entry regarding the bleeding from the ears, with pen or pencil?
A. Pen.
Q. With what color ink?
A. I always use green ink.
Q. Your memory as to all this is clear enough so that you can see yourself doing all this?
A. Of course.
Q. And what plaintiff didn't suffer from you did not write down?
A. I have told you this before.
Q. Doctor, isn't it a fact that there is no entry whatsoever on this card regarding bleeding from the ears?
A. No answer.

The physician's records serve as a very fruitful beginning for a successful cross-examination. A written record is more eloquent and convincing than a thousand spoken words. The solution for a cross-examination as to records is more careful and thorough records, and a searching scrutiny of these records by doctor and counsel before the doctor takes the stand. There is no excuse for a physician being surprised as to the contents of his own records.

3. Physicians should anticipate a cross-examination as to hypothetical questions covered during the direct examination. In almost every case wherein a physician testifies, a hypothetical question is asked. Bouvier's Law Dictionary defines a hypothetical question as "a question put to an expert witness containing a recital of facts assumed to have been proved, or proof of which is offered in the case and requiring the opinion of the witness thereon." The standard pattern of cross-examination, with reference to such question is to proceed in either of two ways (1) to induce the expert to admit that a few specific facts among the many assumed facts in the question are the "sine qua non" or essential facts of the opinion without which the conclusion would not be possible, and then to attack the existence or non-existence of those essential facts, and (2) to ascertain how the opinion of the expert would be affected by adding to the hypothetical question new facts not originally

As an example a case is set forth here wherein the physician claimed that on an assumed state contained in the question.
of facts it was his opinion that the decedent was insane. The assumed facts were as follows: decedent suffered from periods of excitement and depression; he refused to see four of his five children; he believed in spiritualism; he felt that four of his children were extremely anxious for him to die; he was very irritable and obstinate; he complained of constant headaches and these existed for about three years prior to the time decedent died, at the age of sixty-nine years; and he suffered from frequent and violent spells of intoxication and fits of temper. A few of the questions asked the expert follows:

Q. Would you say that everybody who believed in spiritualism was insane?
A. No.
Q. Would you say that a belief in spiritualism in and of itself is an evidence of insanity?
A. Not in and of itself, but I think it is an evidence of insanity in this case.
Q. Was the decedent's belief in spiritualism peculiar or different from the ordinary variety of spiritualism, and if so, describe in what way it differed?
A. I know of no way in which decedent's belief differed from general beliefs on the subject.
Q. Then is it correct that it is the decedent's belief plus the other facts assumed by you that convinced you that decedent's belief in spiritualism is important?
A. Yes.

Q. We agree, therefore, do we not, that a belief in spiritualism in and of itself is no evidence of insanity?
A. I would agree with you there.
Q. And the decedent's belief in spiritualism alone and in and of itself is no evidence of insanity, is that correct?
A. I would say so.

The same series of questions was then directed to all the assumed facts in the hypothetical question. Counsel finally persuaded the expert to admit that three facts were sufficient by themselves to convince the doctor that decedent was insane, to wit, the fact that decedent believed that four of his children were anxious to have him die, that he refused to see four of his children, and that he suffered from periods of excitement and depression. The examination then proceeded in this way:

Q. Would you say that each of these three factors independently suffice to justify a conclusion decedent was insane, or would you say that the combination of these three factors compel that conclusion?
A. The combination.
Q. So that if any of these three factors did not exist you would say that there was an insufficient basis to form an opinion that the decedent was not sane?
A. Excepting if the decedent had practically continuous periods of excitement and depression without let-ups and without any periods of normalcy I might say that that alone was sufficient.
Q. However, you know that the hypothetical question did not assume any such state of facts?
A. Yes, that is true.
Q. And you know that there is no claim that the decedent suffered from practically continuous periods of excitement and depression and that the testimony is to the contrary, do you not?
A. Yes, so I have been told.
Q. So it is correct, is it not, that you believe that it is a combination of these three factors that brings you to the conclusion?
A. I suppose so.
Q. And that if any of these three factors did not exist you personally would not or could not come to the conclusion the decedent was insane?
A. I think that is so.
Q. If you should assume that before decedent refused to see four of his children, those children constantly demanded of decedent whenever they were with him that he divide his wealth among his children before he died, and whenever he would see these four children there were constant arguments and bickering concerning that subject with a result that decedent would become terribly ill and excited—would you say that his refusal to see those four children was without cause or reason?
A. That would depend on just how violent the arguments and the bickering were.
Q. You do not consider it an evidence of insanity do you, if a man of sixty-eight years of age refuses to divide his wealth among his children, do you?
A. No.
Q. If four of decedent's children constantly harped on the subject, do you believe that a sane man might become aggravated and would find it unpleasant to see his children?
A. Those facts were not asked me when I rendered my opinion.
Q. Well, I ask you to assume those facts and ask you whether or not that would alter your opinion?
A. I would say that it probably would.
Q. If the children had expressed sentiments to various people that if the father would only die his wealth would be distributed among them, and these facts were conveyed to decedent, would you say that the decedent's belief in this regard was an insane delusion and the idea of an insane man?
A. If that fact were established I would say that it was not unreasonable.
Q. I am asking you to assume that fact, am I not?
A. Yes.
Q. All the other facts upon which you base your conclusion were assumed and not proved, is that not correct?
A. That is true.
Q. And it is correct, therefore, is it not, that if the decedent's belief concerning his children's wish that he die and that the decedent's refusal to see these four children had a basis in fact and reason, that you would come to a different conclusion with respect to the insanity of the decedent?
A. I would be compelled to do that.
Q. If any of the three factors which you concluded were an essential basis for a conclusion of insanity did not in fact exist, you would say that the decedent was sane, is that not true?
A. I would have to.

The expert should see the hypothetical question before he takes the stand. Especially is this true if it is lengthy, for counsel for the adverse side may ask the physician to repeat it or to repeat the facts which the physician feels are essential for the opinion. The physician should discuss the hypothetical question with counsel before the trial. He should determine and advise counsel what are the essential and the non-essential facts.

4. A cross-examination as to physician's fees or compensation is quite a frequent occurrence. In connection with a case involving personal injuries such cross-examination follows:

Q. Did you come to court today pursuant to subpoena?
A. No, I did not.
Q. You came voluntarily, merely as a result of a telephone call or an oral request?
A. Yes.
Q. You expect a fee for testifying in court today?

A. Yes, I hope that I will receive one.
Q. Do you expect to be paid?
A. Yes, I do.
Q. Have you had any conferences with counsel or with the plaintiff with respect to fees for attending court?
A. No.
Q. No fee has been fixed yet?
A. No.
Q. Who asked you to come to court?
A. Mr. Blank (counsel for plaintiff).
Q. Did you see Mr. Blank before he called you?
A. He came up to see me at my office about three weeks ago.
Q. Was the subject of fees for your appearance today broached at all?
A. No, it was not.
Q. When did Mr. Blank call you on the 'phone about coming to court?
A. Yesterday.
Q. Was the subject of fees or money for your appearance in court discussed over the 'phone by Mr. Blank?
A. No, it was not.
Q. Did you ever have a talk concerning fees for appearing in court with the plantiff?
A. No.
Q. When Mr. Blank called you to ask you to come to court, did you say anything about being paid for coming to court?
A. No.
Q. As a result of your appearance here in court you have been unable to visit a number of patients and thus you will suffer a financial loss by testifying?
A. That is true.
Q. When you stated that you would appear in court, you knew that you would suffer a financial loss unless you were paid for this court appearance?
A. Yes.
Q. But notwithstanding that, nothing whatsoever was mentioned about your fee by you or Mr. Blank, is that correct?
A. That is true.

A physician as an expert is privileged to charge a fee for expert testimony. An ordinary witness cannot demand compensation for testifying. Physicians sometimes fear that they cannot admit that they have been pair or promised a fee for a court appearance. Knowing that it is proper to receive compensation should make it possible for the physician, who is aware of this fact, to defend himself against this standard pattern of cross-examination. Where physician's records as to fees—the charges made and the payments received and the number of house and office visits — are not accurately kept, he can expect trouble from an inquiry along these lines. The remedy is quite simple — better records. Where the physician anticipates that the case will end in court, the records should be kept with an eye toward cross-examination. Nine times out of ten history will reveal this.

The preceding examples were given to illustrate "standard patterns of cross-examination" affecting subject matter. A "standard pattern" can relate to the field of inquiry or the manner of questioning a witness.

A cross-examination as to details is a "standard pattern of cross-examination"—it is a way of questioning a witness. It may be pursued in any field of inquiry. A cross-examination as to details is probably the most frequent method utilized by cross-examiners. The phrase "standard pattern of cross-examination as to details" is intended to describe a cross-examination concerning all the details or particulars of any situation. The inquiry will search into every nook and corner and every phase of a subject Usually, the cross-examiner hopes by pursuing this method to test either the memory or the trustworthiness of the witness. The theory behind a cross-examination as to details is that if a witness did not actually live through experiences claimed to have occurred, he will not be able to consistently or cohesively manufacture or create or imagine the details as fast as the questions are asked. A cross-examination of this character is designed to develop inconsistencies, contradictions and improbabilities in the witness under examination or between that witness and others who have testified. This is a "standard pattern" that may take place in practically any field of inquiry. An examination of this variety may necessitate a long and protracted questioning before any results are achieved. If a cross-examination as to details is had as to visits and treatments (where counsel suspects that the number of visits and the extent of the injuries are exaggerated), the cross-examiner may question the physician as to these matters: what complaints were made by the patient and what treatments were administered on each visit, the exact respects in which the plaintiff's complaint and condition differed on each visit, in what respect each treatment differed from each other, exactly what entries were made on each visit covering each complaint, finding and treatment, exactly when each medicine or treatment was discontinued, when each injury healed, duration of each visit. An inquiry into all these items would be made in the most minute details. A case illustrating a cross-examination as to details follows. These physician's records contained full particulars of the patient's first visit and they set forth the date of each subsequent visit, but there was nothing in the records regarding the patient's complaint or the doctor's findings or treatment on any visit following the initial examination. Notwithstanding this, the doctor testified in quite minute detail as to the patient's complaints and the physician's own findings and treatment on numerous occasions that he saw the patient. The

patient sustained what appeared to be a pretty usual garden variety of fractured arm. The doctor saw the patient twenty (20) times. He recalled special findings, complaints and treatments prescribed on eight of these, including the first visit. After thoroughly questioning the doctor as to everything that occurred on each visit, the cross-examination took this tack:

Q. The plaintiff suffered from a simple fracture of the left arm, is that correct?
A. Yes.
Q. Are the records that you produced and exhibited to me the only records that you have regarding this case?
A. Correct.
Q. Was there anything extraordinary or unusual about this fracture and if so will you describe it?
A. No, there was not.
Q. The last visit was made two years ago, is that correct?
A. Yes.
Q. Was there anything striking or outstanding about this case that makes it stand out in your mind above all others, and if so, describe what that is?
A. No, I wouldn't say that there is.
Q. I suppose that on the average you have treated at least ten patients per day during the last two years?
A. Probably more.
Q. Have you an equally good recollection as to the cases of all your patients?
A. Yes, I have a pretty good memory.
Q. That means that you have treated on the average about sixty patients per week?
A. Yes.
Q. Since the time that you treated the plaintiff you have had occasion to make at least 6,000 visits?
A. Yes, I suppose so.
Q. And can you recall the exact complaints made to you and the exact findings made by you, and the exact treatment administered by you on each of those 6,000 visits, with the same detail that you were able to recall these things with respect to the plantiff?
A. No, I can't say that I could.
Q. Do you recall the names of any patients you saw on the same days that you saw the plaintiff?
A. No.
Q. Can you tell us what complaints were made to you or what findings were made by you, or what treatments were administered by you to any patients that you saw on the days that you saw this plaintiff?
A. No, I can't.
Q. Doctor, have you really and honestly an independent recollection as to what you were told by the plaintiff, and as to what you saw and did on each visit following the first examination, or did you tell us what is usual and customary in fractures of this kind?
A. Well, it may be that I am stating what the usual findings and treatment are for cases of this kind.

At this point more than any other, the advice concerning the statement "I don't know," and "I do not recall," bear repetition. If a witness blithely details what no human being can remember, the person will be branded as a liar.

Every subject upon which a doctor may be questioned can not be set forth in an article of this length. However, there are a few fields of inquiry and methods of examination which should be mentioned—even though they are not discussed fully—in an attempt to set forth the minimum that every physician should know about cross-examination:

1. *Medical Texts:* Prior to the trial, lawyers sometimes gather together medical texts concerning statements which support the propositions for which they are contending and which may differ from what the medical witness is likely to maintain. The physician will be confronted with these "medical authorities" on cross-examination. Before coming to the court the doctor should read up on the subject upon which the examination will be had and familiarize himself with name and authors of medical works in the field and know what books are considered authorities. This rehearsal will enable the physician to convincingly disagree with the medical texts where the statements made therein are unfounded and will enable the physician to support his contentions by books or printed authorities, which always influence court and jury.

2. *Extent of Court Work:* Lawyers will invariably ask a medical witness how much time he spends in court, how frequently he testified, whether or not he is customarily called for plaintiffs or defendants, the type of cases to which he is most often asked to appear and how often the physician has come to court for counsel in the case. The best defense to this line of inquiry is to know what is coming—and it generally does.

3. *Relationship between Physicians and Lawyer and Patient:* The lawyer will explore into the length of time that the witness knows counsel and patient, whether the doctor forwarded the case to the lawyer, how friendly the parties are, and the like. The cross-examiner's design is to show that the doctor is not a disinterested witness and that the testimony is colored by friendship. This line of cross-examination is not as effective with the triers of the facts as counsel ordinarily believes. The advice given under the heading "*Extent of Court Work*" applies with equal force here. To be forewarned is forearmed.

4. *Subjective Symptoms:* Where the patient's injuries or principal injuries are largely subjective, the physician can expect from a competent cross-examiner a strenuous cross-examination about the matter. The cross-examination will first determine what are the subjective symptoms, what are partly subjective and what

the doctor actually saw or found. The cross-examiner will endeavor to find out what exists solely in the patient's mind and what can be established by objective findings. Since cross-examination is designed to test the truth it cannot be expected that "tricks" can be taught to evade its effect. A remedy for this does exist and that is a more thorough examination of the patient by the physician and more complete and careful records. Wherever an appearance in court is a possibility, the physician should remember that he will be questioned as to what complaints and injuries are subjective symptoms.

5. "Have you talked with anybody about this case?" is a common question. Laymen "fall" for this quite frequently. Physicians only rarely. The usual pattern of this cross-examination is in this form:

Q. At any time before today did you discuss this matter, or the testimony that you have just given with any person?
A. No.
Q. Did you ever discuss this matter with the attorney who just questioned you?
A. No.
Q. You testified on direct examination that you personally witnessed the automobile accident?
A. Yes.
Q. At any time did you discuss with the attorney who questioned you the facts or details as to what you saw?
A. No.
Q. Will you please then explain to this court and jury how that attorney knew what you were going to say, or was aware of the fact that you saw this accident?
A. No answer.

Naturally this witness will be discredited in the eyes of the tribunal. Each and every juror is fully aware of the fact that this witness did talk with the party who questioned him, or with his attorney, or with somebody. Unless he had given his name to some person and told what he knew, he would not have been called as a witness. The witness was undoubtedly of the opinion that it was wrong or improper for a witness to talk with anybody concerning the matter. It is perfectly proper for a witness to talk with any person in advance of the trial. As a matter of fact the witness should go over the matter with the attorney who calls him before he appears in court, and he should ask the attorney to cross-examine him in the same way that the witness will be cross-examined on the trial. Likewise the witness should thoroughly familiarize himself with each and every angle of the case about which the cross-examination can be anticipated, and especially regarding all the facts that may appear to be unfavorable to the side for which the witness is being called. It is not wrong to prepare oneself thoroughly for trial.

Preparation is the key to success for the medical witness. A lawyer prepares for cross-examination. Why should the physician do less in anticipation of this mental duel? The physician's preparation should commence with the examination of the patient and with the making of the medical records of the case. Both should be made with an eye toward the trial. Before the trial a study should be made of the subject matter of the pertinent texts and the authorities should be examined. Conferences with the patient and the lawyer before testifying are most desirable. If all these instructions are followed the doctor will step up to the witness stand ready to devour the blood of the cross-examiner.

—The Bulletin of the New York Academy of Medicine, New York, N. Y., October, 1942.

EXCERPTS FROM SHALL ORGANIZED MEDICINE LEAD OR FOLLOW?

George W. Cottis, M.D.
President, Medical Society of the State of New York
Jamestown, N. Y.

I have not the answers to the questions which follow; neither, I venture to say, has anyone else. But the answers must be found and they must come from the only body of men having the necessary knowledge, the medical profession.

1. How can we bring a twelve-cylinder standard of medical services to a man who can barely afford a bicycle?
2. How shall we extend preventive measures to the whole population and so lessen the need for curative medicine?
3. How shall we provide institutional care for hopeless cancer patients
4. How furnish enough convalescent homes to relieve our general hospitals of the burden of caring for patients with chronic ailments?
5. How provide proper care to our civilian population when the most virile one-half of us are in the armed forces?
6. How care for defense workers and workers in general industry? How meet the demands of thousands of workers and their families today in an area where yesterday was only a scattered rural population?
7. How protect the public from its own folly in patronizing quacks?
8. How force venal politicians to pass such legislation as the Copeland bill to check false and dangerous labelling of drugs and foods?
9. How clear our own house of legalized quacks and fakers?
10. How force the speeding up of the production of

doctors by casting out deadwood from curricula and rearranging courses?

11. How encourage and finance scientific research after large fortunes have been eliminated by government policy and private endowments are discontinued?
12. How are we to maintain our own freedom of thought and our own initiative in finding the answers to all of these questions in the face of a regimentation which already has replaced freedom of action in all industry?

As a nation we are beginning to appreciate the tremendous cost of the wishful thinking, wilful blindness and inexcusable ignorance of world affairs which resulted in our unpreparedness to meet what was plainly inevitable. As a profession we should profit by that experience and make sure that we know what is happening or is about to happen to us.

Society is an organism subject to all the laws of evolution. Medicine is an organ of vital importance in that organism. There is of necessity a constant interrelationship between the two, and we cannot appraise our situation apart from that of society as a whole.

We must be aware that the World Revolution is not a revolution in the ordinary sense but a world-wide change as fundamental as that from feudalism to capitalism. In fact, it is already here. Its groundswell has been rolling toward us for many years, but it is only now when the wave has broken on our own shores that we are aware of its strength.

The "New Order" of the Nazis and Japs is only one manifestation of the change. The Russian experiment, the Swedish "Middle Way" and the American New Deal are all equally symptomatic of a new way of life.

It is with this background that we must consider what is ahead of us. We are paddling our canoe down a river with many bends and the current is running faster and faster. To drift blindly may lead to disaster. We cannot turn back, but we can stop paddling long enough to climb to some high point and see what is before us. If we can rise far enough we may get a bird's-eye view. What would it show us?

Of course our nearest view would be that of the greatest nation on earth hamstrung during the critical pre-war years by the myopia of its leaders, preparing terribly late to give its life blood to escape slavery. The wider view would be that of a world at war. But under the smoke and fire of battles we might see all the peoples of the world moving like a tidal wave in one direction. That direction is toward a new form of society in which independence is replaced by dependence and freedom traded for security. The leaders who promise these are the ones the people follow. The security they seek and demand is security against want, hardship and illness. That is the negative way of saying that they demand assurance of shelter, food, clothing, recreation and medical care without much regard to their ability to earn them.

Now where do we as a profession fit into the picture? Most of our deliberations have been concerned with the question, "How are we to meet the issues that confront us?"

The primary question should be not "How?" but "What?" What are the demands of our changing social organization?

What portion of an individual's welfare is to be the concern of the State and what part is to be left to personal initiative?

What shall be the relation of organized medicine to the State and to the public?

What are the defects in our present system of medical care?

What changes or innovations are necessary to provide the highest standards of health for our people?

What is to be our own procedure in the circumstances? Are we to dig in our heels and pull against the trend or are we to set the objectives and assert and prove our right to leadership?

President's address, meeting of the First District Branch, Medical Society of the State of New York, St. Joseph's Hospital, Yonkers, N. Y., October 7, 1942.

COUNTY REPORTING FOR 1943

Mitchell County Medical Society

The Mitchell County Medical Society announces the following officers for 1943:

President—C. L. Roles, Camilla.
Vice-President—J. G. Crovatt, Camilla.
Secretary-Treasurer—D. P. Belcher, Pelham.
Delegate—J. W. Ward, Baconton.
Alternate Delegate—M. M. Burns, Pelham.

Baldwin County Medical Society

The Baldwin County Medical Society announces the following officers for 1943:

President—W. A. Bostick, Milledgeville.
Vice-President—E. Y. Walker, Milledgeville.
Secretary-Treasurer—Herbert M. Olnick, Milledgeville.

THE PRESIDENT'S PAGE

THANKSGIVING

Let's get our minds off war for a few minutes this Thanksgiving month and see the many things we should be thankful for. I made a call the other day to see a friend's old gardener, Uncle Jim, and found him confined to his bed under the tender care of his wife. Diagnosis: acute unilateral epididymitis at the age of 74. He made the startling statement that he had known Dr. Jim Barnett and I since he was a little boy. I am thankful that he was wrong and he is thankful that I was right. He cares for the plants and flowers in a beautiful garden. All nature is adaptable and possesses ability to adjust to adversities.

We should not forget that our patients have varied abilities to adjust to all grades of disturbances and diseases, whether psychic or somatic; sometimes they are entirely of the mind, more frequently of the body and not infrequently combined. Regardless of their origins we should teach and practice adjusting to difficulties and be thankful for the many advantages and privileges we enjoy as free Americans.

I am proud of the way most of our District Societies are holding meetings under difficulties perhaps greater than we have been called on to face heretofore. Obviously it is a duty we owe to our young doctors while they are away. Upon their return they will need organized medicine and it cannot advance with its many benefits without interested and informed members. If we continue to hold meetings now all of us will be thankful when we are again assembled together for the purpose of increasing knowledge to better serve a people free to choose their medical servants.

It has been my privilege to hear Mrs. J. Lon King, president of the Woman's Auxiliary, on several occasions recently discuss the duties of its members. Mrs. King reduces it to "Support the Doctor", for this is



the purpose and accounts for the organization. This is a much broader basis than support your husband. Yet I find some doctors who object to their wives joining the Auxiliary. I am sure that this attitude is due entirely to lack of understanding the purpose of the Auxiliary. It gives me pleasure to urge all members of the Medical Association of Georgia and of the Woman's' Auxiliary to read "Our Objectives", page 374 of the September, 1942, Journal of the Medical Association of Georgia. The Ware County Auxiliary sets a fine example for others to follow. Their procedure is for doctors' wives to meet monthly, "serve soft drinks and talk soft or hard" while together. Oftentimes neither doctors nor their wives in some Georgia communities is sufficiently acquainted. I fear this is true in most communities. If so, we need to get together in all communities at least on Doctors' Day. "Together we stand."

James A. Redfearn, M.D.

THE JOURNAL
OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to the Welfare of the Medical Association of Georgia

478 Peachtree Street, N. E., Atlanta, Ga.

NOVEMBER, 1942

OUR THANKSGIVING WAR PLEDGE

War is with us again. Historic facts are too numerous to be discussed here. What we are interested in now is to do our part as physicians and citizens to solve the great conflict which has gripped the affairs of men, women and children in all parts of the world.

Medicine always has contributed its share to all wars; and medicine is one of the professional groups whose post-war activities never cease. Our physicians must, among other duties, go with combat troops into the theaters of operations, and all must work to the end that each and every casualty will have the best attention possible under the conditions which may obtain, whether such operations be at home or abroad, whether they be favorable or unfavorable. And it must be remembered that in all wars conditions are for the most part unfavorable: everyone must adapt himself or herself to a new environment, to a new way of thinking and to a new way of putting into the best practice what is to be done.

Georgia has contributed its share of physicians to every war since our State became part of the United States of America, and even before. Today the State is not in the most favorable position in the number of physicians, but all of them join with the other citizens to do their best to solve the great conflict before us; and it is certain they will continue to support the Nation in its "all out" effort to win another war. And with victory the physicians of Georgia will again settle down and help solve the post-war problems, whatever they may be. All of this we promise our State and our country; and we are thankful for the privilege to help.

The JOURNAL *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

HOW DOCTORS ARE RATIONED

Recently a number of articles have appeared in the public press regarding the scarcity of doctors, especially in the rural districts. Some criticism has been brought by a U. S. Senate sub-committee in which it was charged that "unplanned recruiting" of doctors was responsible. It was further suggested by this sub-committee that a "civilian agency" should be set up to supervise the recruiting of physicians.

For the information of the doctors of Georgia, allow me to say that the recruiting of physicians was most carefully and minutely planned by the trustees of the American Medical Association and that plan was adopted by the War Manpower Commission. The entire machinery, as now constituted, is through "civilian agencies". There is a "State Committee" for the Procurement and Assignment of Physicians; and a "County Committtee" for the same purpose for every county in the State.

The "State Committee" asks each "County Committee" for a roster of the doctors of that county with their ages. Of those under forty-five years of age it is asked if they are "available" for service in the armed forces, or "essential" to their communities. In this way the local county medical society determines those who are available for commissions and those who are essential for the practice of medicine in that county.

What could be more fair than to have the physicians of each county determine who is "available" and who "essential"? The State Committee's policy has been to sanction the local committee's action in almost every instance. Where a difference of opinion has arisen, committees from interested localities have been invited to come before the State Committee that no injustice be done to any community.

Georgia reached her 1942 quota of physicians for the armed forces about August 1. Since then few commissions have been offered except those already in the making. What our 1943 quota will be we do not know, but the State and County Committees will still try to do their full duty to the

W. A. SELMAN, M.D., *Chairman*
State Medical Committee,
Procurement and Assignment Service.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. Abercrombie, M.D., *Director*

PROPER VENTILATION AND THE PUBLIC HEALTH

This is the time of the year when colds and respiratory infections are so prevalent. It is a time when we are changing over from nature's contribution of pure outside air with more uniform temperature free from smoke and other pollution to a less healthful atmospheric condition of inside air confined to closed buildings. Protection of the public health could be considerably augmented at this time of the year if we would give more attention to the air in our homes.

Artificial heat is needed in most houses from five to eight months of the year, and it is necessary that we discuss briefly the question of heating houses in order to fully cover the subject of ventilation.

Heating methods fall into two chief classes; namely, direct and indirect radiation. Direct radiation heats the air that is already present, as in the method of open fireplaces, stoves, etc. Indirect radiation warms the air that is brought in by passage over some heated surface, such as a hot-air furnace. Indirect radiation is, therefore, a means of ventilation and maintains a more healthy atmosphere when moisture is provided for the dry air. This latter condition, however, is too often neglected. On the other hand, steam and hot water systems not only provide no fresh air but in heating the air already in the room extracts the moisture from it.

This brings up the subject of humidity. Humidity is water in a gaseous state present in the atmosphere. The amount of water vapor per cubic foot of air is the measure of humidity. In the science of this subject we have two terms: absolute humidity, indicating how much water vapor the air contains, and relative humidity, indicating how much water vapor it might contain. In this brief discussion it is sufficient to state that in winter the air in most houses is entirely too dry. This condition affects the mucous membranes of the nose and throat and irritation with susceptibility to infection results. An abnormally warm and dry atmosphere causes an excessive loss of moisture from the human body and is otherwise injurious.

A hot and dry air in our overheated houses gives a sense of chilliness, owing to excessive evaporation. If a room at 68° F. is not warm enough for a healthy person, it is usually because the humidity is too low. There is no heating system that does not require a large amount of water for increasing humidity. The small water vessel to provide humidity and supplied with a hot air furnace is entirely inadequate. In addition to this, dishes of water should be provided in the house. One very simple method to increase humidity is to roll an ordinary desk blotter into a cone and keep the base submerged in a dish containing about an inch of water. The water rises in the blotter and evaporates into the room. Of course there is considerable evaporation from modern bathroom and kitchen plumbing.

Another important subject in connection with ventilation is a gas known as carbon dioxide which is breathed from the human body. This gas is from the process of combustion in which the oxygen of the air forms with certain chemicals in the food. Consequently, a continuous supply of air with the proper amount of oxygen is necessary in this natural process in the body.

Furthermore, when this carbon dioxide is breathed into a room it should be diluted with pure fresh air. Pure air contains from three to four parts of carbon dioxide in 10,000. With an increase to eleven parts in 10,000 the air becomes oppressive. It is estimated that the average adult breathes 500 cubic inches of air per minute and exhales 17 cubic inches of carbon dioxide. It is from these figures that we have the formula for approximately 3,000 cubic feet of air per person per hour. From the above there can be seen the danger of overcrowding in improperly ventilated buildings.

Fresh air is the cheapest and at the same time the most beneficial of all elements. It is free for all and the purest that can be obtained. It is not enough that the air in a room should be relatively pure; it must also be in continuous motion and be constantly renewed. It has been proved by experiment that warm air, even when it is not pure, ceases to produce the most detrimental effect of poor ventilation when it is kept in motion. Moving air does not necessarily mean a draft. Electric fans form an excellent means of keeping air in motion. In a house constructed for good ventilation the doors and windows are so placed that the warm air goes out from the top as the cold fresh air comes in at the bottom.

The requisites for good ventilation are: first, a temperature of from 65° to 68° F. and a relative humidity of moisture from 45° to 60°; second, pure air which is free from dust, insects, oily vapors, soot, etc.; third, odorless air, free from gases and vapors; fourth, the constant motion of the air.

Without special apparatus for ventilation the ordinary air in a room cools, and in cooling falls. As it falls it is heated and rises again, thus keeping up a rotary circulation. This principle may be applied by a window being opened top and bottom so that the warm air will pass out at the top and the cold air in at the bottom. This starts the circulation of air. If it causes too

(*Continued on Page 432*)

GEORGIA STATE NURSES' ASSOCIATION : OFFICERS—1942-3

President—Frieda Grefe, R.N., Savannah
First Vice-President—Sister Cornile, Atlanta
Second Vice-President—Mrs. Mae M. Jones, Milledgeville.
Secretary—Mrs. Esther Watts, Columbus
Treasurer—Jane Van De Vrede, Atlanta.
President—Georgia League of Nursing Education, Ruth Babin, Atlanta
Prsident, Georgia State Organization of Public Health Nursing—Vera Mingledorff, Griffin
Chairman, Private Duty Section, G.S.N.A.—Mrs. Mildred Pryse, Albany
Chairman, State Committee on American Red Cross Nursing Service—Jane Van De Vrede, Atlanta

THE 36TH ANNUAL JOINT CONVENTION, GEORGIA STATE NURSES' ASSOCIATION
Augusta, Oct. 4-7, 1942

Public health nurses, private duty nurses and nurse educators all met jointly in Augusta to seriously discuss ways and means of further placing nursing at the nation's service in an effort to quickly win the war and a lasting peace.

The Tenth District Nurses' Association served as generous host and planned effectively for this meeting. Important decisions were made and plans for immediate work were completed, especially in relation to distribution of nursing service.

Miss Alma C. Haupt, executive secretary, Subcommittee on Nursing of the Health and Welfare Division, Washington, D. C., discussed "Distribution of Nursing Service" and how all nurses are responsible for accelerating the program to supply adequate and safe nursing service. Luxury nursing is not restricted to private duty nursing alone. All groups were urged to re-evaluate their activities to determine wherein any luxury nursing could be eliminated, for at least the duration.

Mrs. R. Louise McManus, instructor, Teachers' College, Columbia University, New York City, spoke on "Tests and Measurements and Methods of Maintaining Nursing Standards in the War Emergency." The Board of Examiners of Nurses has taken the recommendations from the National League of Nursing Education in relation to streamlining nursing for the duration.

American Red Cross speakers included Miss Mary DeLasky from Washington, D. C., and Mr. Henry Howard of the Augusta Local Chapter American Red Cross.

Chemical gas protection was discussed and slides shown by Dr. Perry P. Volpitto, professor of anesthesia, University of Georgia School of Medicine.

The State Nursing Council for War Service held a special program, meeting with Dr. Edwin R. Watson, deputy state chief, Emergency Medical Service, Atlanta, who illustrated with slides the entire medical emergency program O.C.D. Miss Durice Dickerson, state nurse deputy, discussed tentative duties of her office as well as duties of local nurse deputy.

A conference of Directors of Schools of Nursing and members of the Board of Examiners was held where recruitment plans, nurses' records, library facilities and recommendations from the National League of Nursing Education were discussed. The Board of Examiners announced two examinations held this year and stated plans for a third examination are under way. Registration by reciprocity will be expedited by use of brief forms and nurses will be given immediate permit to work without waiting for complete clearance.

Actions taken:

1. An assistant executive secretary for the Georgia State Nurses' Association will be appointed in order to expand the nursing services at least for the duration.

2. Two thousand dollars from the savings account of G.S.N.A. was appropriated for use by the State Nursing Council for War Service.

3. Seventy-five dollars was made available for state and local committees of the American Red Cross Nursing Service activities and so that a meeting could be held early in the spring of 1943.

4. Communications were formulated by the Advisory Council of G.S.N.A. to be presented to the Medical Association of Georgia and the Georgia Hospital Association requesting their cooperation and assistance in eliminating all but essential nursing services in order to meet the increasing demands for service.

5. The matter of redistricting the Georgia State Nurses' Association was discussed seriously and plans were endorsed to promote the organization of at least two additional districts this coming year.

6. Funds were appropriated in order to retain an attorney for the Legislative Committee work for 1943.

7. A larger financial budget was adopted in order to expand in all fields of nursing service.

The revised list of officers by elections at the 1942 convention is indicated above by asterisks.

The 1943 annual convention of the Georgia State Nurses' Association will be held as a business session at the time and place to be decided by the Executive Board.

The total registration was 201; however, it was felt that many more attended than registered.

DURICE DICKERSON, *Executive Secretary*
Georgia State Nurses' Association.

WOMAN'S AUXILIARY : OFFICERS 1942-43

President—Mrs. J. Lon King, 223 Buford Place, Macon.

President-Elect—Mrs. Wm. Bruce Schaefer, Toccoa.

First Vice-President—Mrs. Harry M. Kandel, 432 Abercorn Street, Savannah.

Second Vice-President — Mrs. Walter G. Elliott, Cuthbert.

Third Vice-President — Mrs. Ralph W. Fowler, Marietta.

Recording Secretary—Mrs. J. C. Metts, 303 Anderson Avenue, Savannah.

Parliamentarian—Mrs. S. T. R. Revell, Louisville.

Treasurer—Mrs. Lucius N. Todd, Rural Delivery No. 2, Augusta.

Historian—Mrs. Jack R. McMichael, Quitman.

Corresponding Secretary—Mrs. Wallace L. Bazemore, 127 Beverly Place, Macon.

Press and Publicity—Mrs. J. Harry Rogers, 134 Huntington Road, N. W., Atlanta

Mrs. Schaefer's Message

Mrs. Bruce Schaefer, of Toccoa, president-elect of the Woman's Auxiliary to the Medical Association of Georgia and chairman of organization, issues the following interesting message to members and other women eligible to membership in the State:

"Doctors' wives of today have a tremendous responsibility which cannot be met by other people. It is our duty to organize and lead the various communities in local health and defense drives which are not being carried forward as rapidly as they should be. You cannot form any kind of an organization to accomplish any end without members. Nothing is valuable within itself, nor to the world, without its co-ordinating factors. In the case of medicine, the answer is simple: the component society, the constituent society and the parent body, the Medical Association of Georgia and its Auxiliary must have every eligible applicant enrolled, thus giving opportunity for an enlarged vision and the execution of all necessary objectives, especially in these days of a changing social order.

"Many a minor difficulty exists which under our Auxiliary practice might be done away with by the united efforts of all of our ladies. An increased membership is vital to a better understanding among Auxiliaries, to a fuller discussion of our problems and a broader concept of all philosophy and policies of our organization. When the Woman's Auxiliary to the Medical Association of Georgia was organized, perhaps the foremost consideration in the minds of those promoting its organization was its social value within the medical profession itself. Some of the leaders in the State Medical Association have said that since there are forces within the profession as well as without which are working against its best interests, the time has come when much thought should be given to bringing about unity and solidarity in the profession. Because the social instinct is more highly developed in women than it is in men, they have felt that doctors' wives can perform a distinct service to the medical profession by helping to develop unity and friendliness through fellowship and by aiding in the establishment of health and defense projects in time of war and unrest. Doctors' wives must keep together for the salvation of the profession while our doctors are serving their country here and abroad.

"Collectively, we are a strong force that may be of much use to the medical profession. We know the unselfishness of these men can do much to enlighten a frequently misinformed public about the true character of medical work and its plans for public health and welfare. We can in a non-aggressive way, upset much of the wicked propaganda constantly kept before an ignorant and deluded populace. With this in mind, let us use our time wisely, make our plans carefully and thank God for the opportunity to be of service to this profession of which we are an honored part."

National Bulletin

Mrs. Walter Mobley, of 563 College Street, Macon, has been appointed subscription chairman for Georgia for *The Bulletin*, the official magazine of the Woman's Auxiliary to the American Medical Association. *The Bulletin* is published quarterly and contains plans and reports of the various officers and chairmen and outlines programs and objectives of the national group. *The Bulletin* has been published but a few years and the objective of the national officers is to have every member of the Woman's Auxiliary to the American Medical Association subscribe to it. The yearly subscription is $1 and those wishing to secure the first copy for this year, which contains full reports of the national convention in Atlantic City, are urged to write Mrs. Mobley at once.

Ware County Auxiliary

The major activity for the year of the Woman's Auxiliary to the Ware County Medical Society has been the furnishing of a lounge room at the Waycross Army Air Base. The members secured one of the barracks that was being used for an orderly room and, though the room was very large, they secured furniture to fill it, through the Waycross furniture stores, members and others interested in the work. The room is fitted with a dozen lamps, both floor and table type, chairs, couches, a day bed, three radios, card tables, two large library tables, with blotters, ink, pen and stationery. The members also provided cards, books, current magazines, ping pong sets and other games. They plan to keep the room supplied with magazines, books and other things. Officers of the Auxiliary are Mrs. K. C. Walden,

president: Mrs. W. L. Pomeroy, vice-president: Mrs. C. M. Stephens, treasurer; and Mrs. A. W. DeLoach, secretary.

The Ware County Auxiliary has held several recent interesting meetings. The one at which the new officers were installed was held at the home of Mrs. Leo Smith with Mrs. C. M. Stephens co-hostess. Mrs. Walden appointed the following chairmen: Hygeia, Mrs. H. A. Seaman: health education and public relations, Mrs. Kenneth McCullough and Mrs. B. H. Minchew; press and publicity, Mrs. A. W. DeLoach; program and year book, Mrs. Leo Smith, Mrs. W. F. Reavis and Mrs. J. E. Penland; Doctors' Day, Mrs. W. M. Flanagan and Mrs. W. M. Folks; scrapbook, Mrs. W. C. Hafford, Mrs. D. M. Bradley and Mrs. W. D. Mixson; exhibits, Mrs. B. E. Collins, Mrs. T. J. Ferrell, Mrs. Leo Smith and Mrs. J. E. Penland; radio, Mrs. W. L. Pomeroy and Mrs. W. C. Hafford; summer round-up, Mrs. L. W. Pierce, Mrs. B. E. Collins and Mrs. Harold Muecke; parliamentarian; Mrs. C. M. Stephens; research in romance of medicine, Mrs. W. M. Folks, Mrs. R. L. Johnson, Mrs. R. B. Russell and Mrs. C. M. Stephens; honorary historian, Mrs. J. L. Walker, historian; Mrs. A. W. DeLoach; Red Cross work, Mrs. C. A. Witmer and Mrs. J. E. Penland. The Auxiliary voted unanimously to continue their regular monthly purchase of War Saving stamps.

The Woman's Auxiliary to the Ware County Medical Society met recently in Waycross with Mrs. B. R. Russell and Mrs. D. M. Bradley hostesses at the home of the former. Mrs. K. C. Walden, president, presided. Reports were made on the furnishing of the day room at the Waycross Army Air Base, which has been accepted as the major project for the year, and the contribution made to the Red Cross to purchase kits for the soldiers. Arrangements are being made for the Auxiliary to cooperate with the Waycross Service League in the securing and showing of health films in connection with the well baby clinic. Mrs. DeCarr Sims spoke on "Music as a Morale Builder." Mrs. Harold Milton and Mrs. Paul Jenkins were guests at the meeting. Plans for the year's work were formulated at a meeting held at the home of the president, Mrs. K. C. Walden.

Baldwin County

The autumn meeting of the Woman's Auxiliary to the Baldwin County Medical Society was held recently at the home of Mrs. J. I. Garrard in Milledgeville. Mrs. Richard Binion, president, presided. Dr. Herbert Olnick, county health commissioner, showed films dealing with health problems and discussed each film. Mrs. Garrard and Mrs. W. A. Bostick, co-hostess, served refreshments.

Fifth District

The Woman's Auxiliary to the Fifth District Medical Society held its semi-annual meeting October 19 at the Academy of Medicine on West Peachtree Street in Atlanta. Mrs. J. Harry Rogers, manager, presided, and Mrs. Harvey Griggs, of Conyers, secretary, read the minutes of the spring meeting, which were approved. Mrs. Don Cathcart, the new vice-manager, was introduced. She succeeds Mrs. H. G. Ansley, who recently resigned. A nominating committee, composed of Mrs. George Williams, Mrs. Mason Lowance and Mrs. Marion Pruitt, was appointed to present names of new officers at the spring meeting. Mrs. J. Lon King, of Macon, president of the Woman's Auxiliary to the Medical Association of Georgia, was honor guest of the evening and brought members an inspiring message on the Auxiliary's aims and how they were being carried out this year. Later members joined members of the Fifth District Medical Society for a program presented by the medical staff of the Lawson General Hospital. Prior to the meeting the Auxiliary had charge of a delightful buffet supper at which members of the Auxiliary and Society were present.

PROPER VENTILATION AND THE PUBLIC HEALTH

(*Continued from Page* 429)

much draft, a board may be placed on the window sill to allow circulation upward. Glass deflectors may be obtained for this purpose.

Cool moist air may be obtained by hanging a damp sheet or cloth in the room and rewetting it s it dries. Fireplaces act as good ventilators. Fans and blowers have been perfected for ventilation and are comparatively inexpensive.

Ventilation is becoming more of a scientific, sanitary and public health problem. In recent years great progress has been made in air conditioning, chiefly of railway passenger coaches and public buildings. This is a highly specialized science and not appropriate for this discussion.

L. M. CLARKSON, *Director*,
Sanitary Engineering Division.

NEWS ITEMS

The Second District Medical Society will hold its next meeting at Albany, April 8, 1943. Officers of the Society are Dr. W. S. Cook, Albany, president; Dr. L. W. Willis, Bainbridge, vice-president; and Dr. J. C. Brim, Pelham, secretary-treasurer.

Appointments recently made to the State Board of Medical Examiners are: Dr. W. K. Smith, Pembroke; Dr. J. W. Palmer, Ailey, reappointed; Dr. F. C. Holden, Atlanta.

Dr. William Shearouse, Savannah, has been appointed assistant Chatham County physician.

Dr. John W. Daniel, Jr., Savannah, has been elected physician for the Pensions and Charities Committee of the City Council of Savannah.

The Fifth District Medical Society met at the Academy of Medicine, Atlanta, October 19. The members of the Society and the Woman's Auxiliary were entertained at a buffet supper by the Fulton County Medical Society.

Addresses were made by Dr. J. A. Redfearn, Albany, and Dr. W. A. Selman, Atlanta, president and president-elect, respectively, of the Medical Association of Georgia. Titles of scientific papers on the program were: "Functional Digestive Diseases as Encountered at the Lawson General Hospital" by Major Donald T. Chamberlin, M.C., Chief of Gastro-Intestinal Section; introduced by Dr. Geo. A. Williams: "The Arthritic Problem as Viewed at the Lawson General Hospital," Major Joseph J. Wallace; introduced by Major D. Henry Poer, M. C.: "Three Thousand Hours of Cardiovascular Diseases in a General Hosipital", Major Walter M. Bartlett, M. C., Chief of Cardiovascular Section; introduced by Capt. Robert Bruce Logue, M.C. Officers of the Society are: Dr. Jeff L. Richardson, Atlanta, president; Lieut. J. D. Manget, Jr., M. C., Atlanta, vice-president; Dr. Jas. C. Thoroughman, secretary-treasurer; Dr. M. C. Pruitt, Atlanta, councilor; Dr. S. A. Kirkland, Atlanta, vice councilor.

Dr. Thomas N. Freeman, formerly of LaGrange, has moved to Social Circle and will continue the practice of medicine there.

Titles of papers published in The Bulletin of the Fulton County Medical Society, Atlanta, dated October 19 were: "President's Message" by Dr. Major F. Fowler, Atlanta; "Fainting", Dr. E. A. Stead. Editorials and news: Virus Pneumonia" and "Oglethorpe University Medical School Sponsors Lecture at Academy of Medicine".

Dr. Jno. W. Oden, former superintendent of Georgia Training School for Mental Defectives at Gracewood, has been appointed superintendent of the State Tuberculosis Sanatorium at Alto. Before being transferred to Gracewood, he was superintendent of the Milledgeville State Hospital, Milledgeville.

The Visiting Staff of Grady Hospital, Atlanta, met on October 13. Dr. Claude Prevost presented reports of "Acute Fulminating Septicemia with Bilateral Adrenal Gland Hemorrhage (the Waterhouse-Friderichsen's Syndrome) with Report of Two Cases of Meningococcemia", discussed by Dr. Paul Beeson; Dr. Frank Mullins presented a report of the "Pathology of Three Cases of Adenomyosis". Dr. Jeff L. Richardson is president of the staff, and Dr .Eleanor Townsend is chairman of the Program Committee.

Hon. Robert F. Maddox, Atlanta, Chairman of the State Board of Health, entertained in honor of Dr. T. F. Abercrombie at the Capital City Club on October 15 for his efficient and successful work in promoting the health of the people, reducing the death rate and effecting a great reduction in preventable diseases. During his 25 years of faithful service, his work has gained momentum and wide publicity among the people of the State. He has been a savior to thousands of people. Yet, his coworkers have contributed equally to the success of the programs undertaken from time to time with the cooperation and help of the Medical Association of Georgia and the various county medical societies. There were about 50 at the luncheon, including members of the State Board of Health, representatives of the press, Medical Association of Georgia, Fulton County Medical Society. A Silver Loving Cup was presented to Dr. Abercrombie by the members of the State Board of Health for his 25 years of service as director of the State Department of Public Health.

The Bibb County Medical Society met at Ridley Hall, Macon, October 20. A motion picture entitled, "Medical and Surgical Treatment of Gastric Ulcer" was shown.

A staff meeting of the Georgia Baptist Hospital, Atlanta, was held on October 20. Dr. Joseph C. Massee, chairman of the Clinico—Pathological Committee, was in charge of the program. "Virus Pneumonias" were discussed.

Dr. D. M. Bradley, Waycross, entertained members of the Ware County Medical Society at a luncheon at the Parish House of Grace Episcopal Church.

The Seventh District Medical Society met in Rome on September 30. Speakers on the program included Dr. J. A. Redfearn, Albany, president of the Medical Association of Georgia; Dr. W. A. Selman, Atlanta, president-elect of the Association; and Dr. T. C. Davison, Atlanta. Dr. Robert Norton, Rome, was chairman of the Entertainment Committee and arranged a barbecue dinner. Officers of the Society are Dr. M. M. Hagood, Marietta, president; Dr. W. D. Hall, Calhoun, secretary-treasurer. The next meeting of the Society will be held in Marietta on April 7, 1943.

Dr. H. A. Miller, formerly of Fairmount, Minnesota, has moved to Monroe and opened an office for the practice of medicine. He graduated from the University of Minnesota Medical School at Minneapolis.

The Georgia Medical Society, Savannah, met on October 13. Dr. Julian Quattlebaum read a paper, "Presentation of Surgical Cases".

The Georgia Medical Society, Savannah, held a meeting on October 26. The program consisted of a "Symposium on the Open Versus the Closed Method in the Treatment of Fractures".

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, November 2. Dr. P. S. Pelouze, Associate Professor of Urology, University of Pennsylvania, spoke on "Gonorrhea". He was introduced by Dr. T. F. Abercrombie, Atlanta, Director, State Department of Public Health.

The Staff meeting of Emory University Hospital, Emory University, met on November 3. Col. Norman E. Titus, M. C., Lawson General Hospital, Atlanta, spoke on "Recent Advances in Physiotherapy"; Dr. Wm. Platt reported a case, "Glomerulonephritis with Uremic Pericarditis".

The Bibb County Medical Society met at Christ Church Parish House, Macon, November 3. Dr. P. S. Pelouze, Philadelphia, Pa., was the principal speaker.

Dr. J. R. Garner, Atlanta, spent November 4, 5, 6, in Baltimore on medicolegal business. He is chief sur-

geon of the A. & P. R. R., Western Railway of Alabama and the Georgia Railroad.

A meeting was held at the Sheffield Clinic, Georgia Baptist Hospital, October 23. The Sheffield Clinic, Cancer Commission of the Medical Association of Georgia, Division of Cancer Control of the State Department of Public Health cooperated. Dr. Arthur P. Stoue, professor of Columbia University College of Physicians and Surgeons, and director of the Research Department of the Presbyterian Medical Center, spoke on the "Control, Prevention, and Early Diagnosis of Cancer with a Review of Work Done by Cancer Clinics in Georgia."

The University of Georgia School of Medicine, Augusta, has been added to the list of approved medical schools by the Council on Medical Education and Hospitals of the American Medical Association.

OBITUARY

DR. WILLIAM BRYAN STANDIFER, Blakely; member; University of Georgia School of Medicine, Augusta, 1876; aged 86; died on June 25, 1942, at his home after an illness of several weeks' duration. He was born and reared in Blakely and practiced there until he retired, except for the years 1881-82 while he served as quarantine master at the port of Apalachicola, Florida. His father graduated at the University of Georgia School of Medicine, Augusta, in 1851; Dr. W. B. Standifer graduated in 1876 and his son, Dr. J. G. Standifer, graduated in 1911. Since 1837, Blakely has had a Dr. Standifer and yet has an active, successful practitioner in Dr. J. G. Standifer. He was a member of the F. & A. M., the Chapter and Council, and was senior past master of Magnolia Lodge for 62 years, and a member of the Episcopal church. Dr. Standifer is survived by two daughters, Mrs. N. H. Strickland and Mrs. S. F. Gammon, Sr., both of Miami, Florida; one son, Dr. J. G. Standifer, Blakely. Rev. Joseph H. Harvey, vicar of the Holy Trinity Episcopal church, officiated at the funeral services. Magnolia Lodge No. 86, F. & A. M., were in charge of the services at the graveside. Burial was in Blakely cemetery.

DR. WALTER B. HOLMES, Wadley; member; Baltimore Medical College, Baltimore, Maryland, 1892; aged 73; died on September 25, 1942, after a short illness. He was a native of Jefferson county. After he graduated in medicine he took post-graduate study at the New York Polyclinic and Medical School, New York City. He practiced medicine in Wadley and the surrounding community for 48 years. Dr. Holmes held extensive farming interest, and was prominent as a civic leader and business man. He is survived by his widow and several half brothers. Rev. Roy Matthews officiated at the funeral services conducted at his residence.

DR. JAMES CORBIN AVARY, Atlanta; Emory University School of Medicine, Emory University, 1882; aged 86; died on October 19, 1942, in Grady Hospital. He was born in DeKalb County. After he graduated in medicine, he took post-graduate study at Rush Medical College, Chicago, and at the New York Polyclinic Medical School and Hospital, New York City. When Dr. Crawford W. Long demonstrated the use of ether as an anesthetic at the Medical College of Georgia at Augusta (now known as the University of Georgia School of Medicine), Dr. Avary's father, Dr. J. C. Avary, Sr., was then a student at the school and submitted himself as one of the subjects to whom was given ether anesthetic. For many years he was on the faculty of the Southern Medical College, Atlanta, and at one time was coroner of Fulton County. He had a wide reputation as a skilled surgeon. Surviving him are his widow and one brother. Rev. Pierce Harris officiated at the funeral services conducted from Peachtree chapel. Burial was in the Decatur cemetery.

DR. JAMES BARNETT LEWIS, Waynesboro; member; Medical College of the State of South Carolina, Charleston, S. C., 1911; aged 54; died on October 24, 1942, at the University Hospital, Augusta. He was a native of Lincoln County. He practiced medicine at Washington from 1911 until 1920; then moved to Waynesboro and was associated with Dr. H. Q. Morton. Dr. Lewis served many years as county physician. He was held in high esteem by the people of Burke and adjoining counties, member of the F. & A. M. and Burke County Medical Society. Surviving him are his widow, one daughter, Miss Minnie Lewis; one son, James Barnett Lewis, Jr. Rev. Nolan K. Benfield, Rev. Willis Howard and Rev. Roy McTier officiated at the funeral services conducted at the residence. Burial was in Magnolia cemetery, Waynesboro.

DR. OSCAR G. CRANFORD, Sasser, member; Baltidied October 25, 1942, in a hospital at Moultrie. He was more Medical College, Baltimore, Md., 1892; aged 76; born in Dranesville. Dr. Cranford had many friends in Terrell and adjoining counties and was a successful practitioner. He was a member of the Randolph County Medical Society, American Legion, Woodmen and Masons. Surviving him are his widow, one son, Robert H. Cranford, attorney, Moultrie.

IN MEMORIAM

Fulton County Medical Society and Atlanta, on Sept. 7, 1942, lost a loyal member and a good physician in the death of Dr. John Thomas Floyd, who died in his sleep early that morning.

Dr. Floyd was born Feb. 11, 1881, in Troup County, Georgia, the son of the late Dr. W. G. Floyd. His father was one of the outstanding physicians of Alabama and as a member of the Board of Medical Examiners signed his son's license to practice.

Born into a physician's family, Dr. Floyd grew up to be a doctor. He was graduated from Emory University School of Medicine in 1905 and served as an intern 1905-1906 at the old Tabernacle Infirmary, now the Georgia Baptist Hospital.

He was always a loyal member of the staff of the Georgia Baptist Hospital and served as president of the staff. He was a good general physician but specialized in gynecology and general surgery.

Dr. Floyd was an industrious person. He busied himself in many activities but due to his health he had to limit them for the past three years. He liked to work, he liked to succed on his own merit and to understand what-

ever he undertook to accomplish from the fundamentals up. He was thorough in all he undertook.

He was one of the organizers of the Physicians and Dentists Credit Bureau and gave many hours of his time over a period of 15 years to the growth and success of the organization. He served on its Board of Directors for 14 years and as president for several times.

He was a member of the Fulton County Medical Society since Feb. 6, 1913, and contributed to the Society in various capacities. He served as a member of the Board of Trustees in 1919. He was a member of the Medical Association of Georgia, the American Medical Association and the Southeastern Surgical Congress.

During World War I he served on the examining board of the Fourth District in Atlanta and the last year was commissioned as captain and assigned to duty at Camp Greenleaf, Chattanooga, Tenn.

He had an alert mind and stood for and practiced the highest ideals in his medical career. He was considerate of others and a loyal friend. His was a happy nature, looking on the optimistic side of life. He felt that each man and especially physicians owed to mankind the best service he was capable of rendering. He was generous hearted and got a great satisfaction out of his profession in which he worked for the sheer love of it.

Dr. Floyd did not seek honors. He was content to enjoy the simple pleasures of life and to serve his fellowman to the best of his ability. He was a homeloving man and a genial host. He enjoyed hunting and fishing and each season made several trips with his friends.

We will miss his sincere and stimulating nature but his memory will be cherished by many friends and colleagues.

He is survived by his wife, a daughter, Mrs. George Ansley Wilcox, and a granddaughter, Marilyn Wilcox.

Whereas, this Society has lost one of its loyal members, Atlanta has lost a good physician and a good citizen,

BE IT RESOLVED: That we record in our proceedings this record of his life and that a copy be sent to his family with expression of deepest sympathy.

A. P. Flowers, M.D., *Chairman*
Dan Y. Sage, M.D.
Leon Brawner, M. D.

RESTRICTIONS ON QUININE

The War Production Board has issued a conservation order affecting quinine and cinchona preparations. Physicians and pharmacists are advised that quinine or quinine salts and cinchona preparations are to be used only for the treatment of malarial fever and are to be dispensed for this purpose only upon a physician's prescription. Quinine may be used also for making urea or quinine hydrochloride.

Wholesale druggists and retail pharmacists will not be allowed to purchase the above-mentioned products in quantities greater than 50 ounces. If your pharmacist is refusing to fill prescriptions for these drugs unless they are being used for the treatment of malarial fever, or, in the case of the exception, for making of urea and quinine hydrochloride, he is following the orders of the War Production Board.—Roland T. Lakey, Dean, College of Pharmacy, Wayne University, Detroit, Michigan.

GEORGIA PEDIATRIC SOCIETY
SCIENTIFIC MEETING

Afternoon Session, Pompeian Room, Biltmore Hotel
Evening Session, Academy of Medicine
Fulton County Medical Society
Atlanta, Georgia
Dec. 10, 1942

Officers of the Georgia Pediatric Society

Frank Schley, M. D., Columbus	*President*
T. F. Davenport, M. D., Atlanta	*President-Elect*
Howard Glover, M. W., Newnan	*Vice-President*
Don F. Cathcart, M. D., Atlanta	*Secretary-Treasurer*

Scientific Committee

W. W. Anderson, M. D.	Atlanta
T. F. Davenport, M. D.	Atlanta
Joseph Yampolsky, M. D., *Chairman*	Atlanta

12:30 P. M.—Luncheon, Pompeian Room, Biltmore Hotel

1:45 P. M.—Afternoon Session, Pompeian Room, Biltmore Hotel

1. The Significance of Protein in the Diet.
 Alexander Ashley Weech, M. D., B. K. Rachford Professor of Pediatrics, University of Cincinnati; Medical Director of the Children's Hospital Research Foundation, Cincinnati.
2. Persistent Urinary Infection in the Young.
 Meredith Campbell, M. D., Professor of Urology, New York College of Medicine, New York.
3. Neurologic Manifestations of the Newborn.
 Abraham Levinson, M. D., Assistant Professor Pediatrics, Northwestern University Medical School; Professor Pediatrics Cook County Graduate School, Chicago.
4. Adjournment.

6:00 P.M.—Buffet Supper, Academy of Medicine, prepared and served by the wives of Atlanta Pediatricians, under the chairmanship of Mrs. W. W. Anderson.

7:00 P. M.—Evening Session, Academy of Medicine, Main Auditorium.

1. Address of Welcome:
 a. Major F. Fowler, M. D., Atlanta, President, Fulton County Medical Society.
 b. W. W. Anderson, M. D., Atlanta, Past President, Georgia Pediatric Society.
2. Response to Address of Welcome:
 a. C. Hall Farmer, M. D., Macon, Past President, Georgia Pediatric Society.
3. Value and Limitations of Spinal Puncture in Children
 Abraham Levinson, M. D., Chicago.
 Introduction: Joseph Yampolsky, M. D., Atlanta.
4. The Surgical Treatment of Certain Common Urologic Conditions in Children.
 Meredith Campbell, M. D., New York.
 Introduction: Wallace L. Bazemore, M. D., Macon, President Georgia Urologic Society.
5. Cortical Maturation and the Development of Behavior in Infants.
 Alexander Ashley Weech, M. D., Cincinnati (moving pictures).
 Introduction: William Kiser, Jr., M. D., Atlanta.
6. Adjournment.

CIBA AWARDED MINUTE MAN FLAG

In recognition of more than 95 per cent participation in the federal payroll savings plan, a Minute Man flag has been presented to the Ciba Pharmaceutical Company of Summit, N. J., by the United States Treasury Department War Savings Staff.

The presentation was made by W. H. Hassinger, deputy administrator of the War Savings Staff, and a speech of acceptance was delivered by J. J. Brodbeck, executive vice-president and general manager of Ciba.

Two employees of the company, Alice Christensen and Carmello Terranova, accepted the flag from Mr. Hassinger in behalf of Ciba.

Americans today, Mr. Brodbeck warned, must work "not only for our own good but for the good of all." He urged continued participation in the war savings program by all Ciba employees.

Three divisions of Ciba which had attained a 100 per cent participation in the payroll savings plan were presented with Minute Man banners by Mr. Brodbeck.

Ciba's chemical manufacturing department received an individual Minute Man banner with a rosette. In making this award to Donald Mundwiler of the department, Mr. Brodbeck said that its employees were contributing more than 10 per cent of their total earnings each week. This was the first of the Ciba department to attain this goal.

Mr. Brodbeck also presented Minute Man banners to Miss Marian Davis for the office and clerical force and Harry Bosshard for the maintenance department.

Company employees attended the ceremonies in working clothes. Guests included Summit officials and civilian defense leaders.

EXIGENCY OF WAR

Oleum Percomorphum 50% is now known as Oleum Percomorphum 50% with Viosterol. The potency remains the same; namely, 60,000 vitamin A units and 8,500 vitamin D units per gram. It consists of the liver oils of percomorph fishes, viosterol, and fish liver oils, a source of vitamins A and D in which not less than 50% of the vitamin content is derived from the liver oils of percomorph fishes (principally Xiphias gladius, Pneumatophorus diego, Thunnus thynnnus, Stereolepis gigas, and closely allied species).

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MEDICAL HISTORY—AS YOU LIKE IT

The Origin of the Caduceus. From as far back as Greek antiquity, and even in Biblical times, the snake has been used as a symbol of medicine and health. Presumably it was because the principle of life was represented by the serpent with its ability periodically to cast off its skin and apparently renew its youth. Accordingly, tamed snakes were used in the temples of Aesculapius for their psychic effect and also to lick wounds of the patients. Aesculapius, the Grecian god of medicine, is always represented as carrying a heavy, rough staff with a single serpent entwined around it—the staff for walking and the serpent as a symbol of medical knowledge or healing powers.

The winged caduceus used today as the emblem of the medical profession is a light wand with a pair of wings at the top and having two snakes entwined about the wand. It was originally the wand of Mercury, messenger of the Gods, and later symbolized the peaceful conduction of business—the mercantile world as opposed to the military. A somewhat similar form of this caduceus was also used as the staff of Hermes, who was god of many things, such as the wind and air, as well as robbers, thieves, and traitors, and guide of souls to Hades. Some have facetiously suggested that from this latter duty of Hermes the caduceus came to symbolize the medical profession.

Just exactly how the winged caduceus, which has no legendary association with medicine, came to represent the profession is not known. It is thought, however, that certain medical printers used it as part of their frontispieces to show the unity between medicine and letters as indicated by the two entwined snakes. From this it was probably misrepresented as being an emblem of medicine and later incorporated on the insignia of the U. S. Army Medical Corps—its misuse being practically assured from then on.

No matter how widespread its use, however, the winged caduceus with two entwined snakes is actually not a symbol of the medical profession. The only true emblem is the rough staff with a single serpent, the staff of Aesculapius, god of medicine.

—The Journal—L. S. U. School of Medicine.

References—Arnold, H. L., Serpent-Emblems of Medicine, Mich. M. Soc. 36:157, March, 1937.

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A NEW DISEASE ENTITY (?)

C. D. Bowdoin, M.D.
Atlanta
Director, Division of Preventable Diseases, Georgia Department of Public Health

During August 1940, there occurred at Wrens, Georgia, an outbreak of a most unusual disease. The information contained in this article was obtained by Dr. S. C. Ketchin, Dr. Jno. R. Lewis, Jr., and myself in cooperation with the local physicians, Dr. J. J. Pilcher and Dr. Geo. L. Carpenter.

The first patient became ill on August 1, and by August 12th some 25 cases had occurred. By August 21st all patients had either recovered or were recovering. In all a total of 35 cases occurred; however, only 28 were seen by the local physicians. Five of the 28 were colored. All cases were among males, and the ages ranged from 6 - 42. The average age was 16. Studies were made on 17 of these cases by the County Health Department. Symptomatologies of these patients were in most respects similar. All patients gave a history of sudden onset with severe headache, predominantly frontal, post-orbital pain, chilliness, and sweating. Some two-thirds of the patients complained of nausea and a rather large number vomited. Some two-thirds complained of lumbar pain and pain in the legs. About one-third complained of some pain in the joints. Epigastric pain was complained of by about one-half of the patients studied. Diarrhea was found in two cases, but constipation was the rule.

Nine patients were seen in bed, five of them rather acutely ill. The most striking thing which I observed was a fine red rash distributed chiefly over the anterior aspects of the legs, being more predominant over the tibia. On one patient the rash was also seen on the chest and abdomen. The rash was finer, but not unlike that seen in measles. It was fleeting in nature, remaining only 24 to 48 hours, and in most cases appeared around the fifth day. This rash was either unobserved or did not occur in the earlier cases. The acutely ill patients presented a rather dull facies with slight to moderate injection of conjunctivae and some slight injection of the throat. The temperature range was from 100.6 to 104.5, accompanied by a characteristically slow pulse which ranged from 55 to 90, corresponding to temperature range. Other positive physical findings were conspicuous by their absence. In one patient an enlarged epitrochlear node was found. The average duration of fever was seven days and most of the patients were out of bed on the eighth day.

White blood counts done on the five acutely ill patients ranged from 6,500 to 11,700 with the differential counts being about normal. Blood cultures were obtained on 11 patients and were reported as negative. Agglutination tests for typhoid, paratyphoid A and B, undulant fever, endemic murine typhus, and tularemia were all negative. Stool cultures were sent in on 13 cases, and these were also reported negative.

Going into the question of some common factor that might play a part in the outbreak, it was found that some drank water from wells while others used the city supply. Milk was obtained from a number of different sources. Mosquitoes and flies were common, but so were they to the rest of the population. There was no history of any picnic or common source of food. The only common factor was a small, sluggish, little stream known as Brushy Creek. This little stream wound itself slowly through the edge of the village and finally pooled into the old swim-

ming hole. Each and every patient, without exception, had found relief from the summer heat in this dirty swimming hole; most of the patients had indulged on numerous occasions and all had indulged within one week prior to their onset. Investigation of this stream revealed that it was very likely that surface privies drained into it. In addition, it was found that about 100 yards up stream from the swimming hole offal from slaughtered cattle was dumped from time to time by the local butchers. A cow dying unexpectedly also received a watery grave at this point. By this time I had concurred in the diagnosis of "Brushy Creek" fever, which the local physicians had come to call it.

The first stool specimens arrived in our laboratory on August 15th, and one technician was assigned to handle these stool cultures. On the 15th, 5 stools were received; on the 16th, 2; on the 17th, 3; on the 19th, 2; and on the 20th, 1. On the 25th of August, this technician became ill and she soon sought the services of her private physician, Dr. Hal M. Davison. I am greatly indebted to both of them for the privilege of using her case in this report, since I am strongly convinced that she had a laboratory infection of this unusual disease.

This young lady was a white female, aged 23, with blonde hair and a very fair complexion. Her clinical history in her own words was as follows: "On August 25th, I had a sudden onset with severe frontal headache; temperature ranging from 103-104 degrees; generalized aching, most pronounced in the back and legs; and profuse sweats. On the fifth day a fine rash appeared first over chest and abdomen, where it was more pronounced, but spread to legs, arms, neck, and face. Temperature decreased after appearance of rash. Other symptoms subsided. Ill about 10 days and hospitalized five days."

The history as found on this young lady's hospital record revealed that she was admitted to the hospital on August 29th and in addition to the above information, her temperature usually went up twice a day. The rash which had appeared on the day of her admission to the hospital was slightly uncomfortable but did not itch. Her past history revealed that she had had measles, mumps, whooping cough, chicken-pox, tonsillectomy, and appendectomy. Nothing else of any significance was revealed in the history.

Physical examination on admission showed temperature 99, pulse 88, respiration 24, and blood pressure 130/80. The patient was a well nourished female, not acutely ill. The skin was cool and moist and there was a small red rash over the trunk and face and to a lesser extent over the extremities. Examination of the throat revealed a small ulcer with grey center on the soft palate. Other physical examinations were essentially negative. Red blood count was 3,680,000; white blood count, 5,500; hemoglobin (Sahli) 72 per cent; differential count, polys 46; eosinophiles 2; and lymphocytes 52. Urine examinations were negative.

According to a note found on the chart, the patient became afebrile shortly following the appearance of the rash and remained so while in the hospital. On August 31st, a note revealed that the rash had almost disappeared, patient was afebrile and felt well. On September 2nd, patient was dismissed apparently well.

Two blood cultures were obtained on this patient, one on August 28th, three days after her onset, and the next on August 30th. Both were negative for culture and for agglutination against typhoid, typhus, undulant, and tularemia.

Convalescent sera were obtained from 22 of these cases, including the technician, and were studied at the National Institute of Health. Agglutination tests were done for tularemia, undulant, typhoid, paratyphoid A and B, and the Weil-Felix was carried out, using proteus strains OX2, X19, and OXK. All of these tests were negative.

Summary

A description has been given of an outbreak of an unusual disease occurring at Wrens, Georgia, during August 1940. It has been pointed out that all cases were males who, without exception, had been in

(continued on page 442)

THE PRESIDENT'S PAGE

CHRISTMAS GREETINGS



This is the season of happiness, cheerfulness and "good will toward men" for all of us. It is a never-ending period for doctors who must ever teach these worthy lessons.

It so happened that I arrived at church today a half hour early, due to a change in the hour of service "for the duration". While writing the beginning of this message a distressed mother paused with tears in her eyes to say that her son had quit his job and enlisted in the Navy. He held one of the most responsible positions in Albany. I knew he was going to resign and enlist before she did, a thing which she learned. Now she asks why I let her son do this. She was told that behind her grief was comfort and happiness for her in the thought that her son had not only his fellowmen but himself to live for, and with here and hereafter. The thought comforted her.

It is a season when we may consider with benefit our accomplishments. We should always remember that the lasting benefits for us are found mainly in giving counsel and advice to our patients. Financial remunerations received by us are helpful but must never be considered of primary importance; finances are essential to both our families and ourselves but real values are the result of unselfish service in suffering humanity.

Oftentimes young doctors, when asked how they are getting along, will reply in terms of collections and appear satisfied. As a rule competence and experience gradually arouse desires to serve others.

Such noble thoughts taught in religions, at mothers' knees and civic clubs, were also taught to medical students from the beginning of their careers when some noble teachers explained that the practice of medicine as a rule did not lead to great financial success. Therefore, if such was the belief which influenced any medical student to choose medicine as a career, turn now to the business field where such ambitions might be satisfied. When a young doctor feels the thrill of financial success and boasts about it I rejoice with him and help him when possible to avoid the path of the miser and enter upon the highway to joy, happiness and good will found only through unselfish service to our less fortunate fellowmen.

This is also the season to buy Christmas Seals so that the fight against tuberculosis can be continued. Our duty is not only to buy seals but we ought to insist on the building of tuberculosis wards in our general hospitals where thousands of neglected young Georgians would be offered a chance to live. Upon first consideration you may think of some objections, but everyone you raise probably has been answered in a pamphlet available through the National Tuberculosis Association. The American Medical Association, the American Hospital Association and the Medical Association of Georgia all endorse and support this plan.

Remember to distribute "Buy Your Vitamins in Food", buy seals, buy bonds and stamps and send in your 1943 medical dues soon. Season's Greetings.

James A. Redfearn, M.D.

THE JOURNAL
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Devoted to the Welfare of the Medical Association of Georgia
478 Peachtree Street, N. E., Atlanta, Ga.
DECEMBER, 1942

LETTER FROM A 1941 GRADUATE OF EMORY UNIVERSITY SCHOOL OF MEDICINE

Editor,
The Journal of the Medical Association
of Georgia,
Atlanta.

I recently read your article in THE JOURNAL for October 1942 entitled "The Strange Policies and Practices of Emory University School of Medicine" and being a graduate of the school I can vouch for every word you say. I have no kick coming as I happened to be one of those who "tucked my tail" in a manner which suited the executioner in the Anatomy Department, but I do want to say something in regard to the shameful practices of this department as well as to defend the other departments.

Your article is exact and to the point and not a thing is exaggerated in the least. I know this to be so as I spent one whole school year under the executioner and never knew from one day until the next where I stood. The only ones who knew their approximate grades were those who either were among the ten highest or the ten lowest on a given examination. Their grades were posted and those in between the extremes had no idea where they stood, whether in the middle, near the upper ten, or near the lower ten.

The quiz papers were returned but were soon taken up again. They were covered with red hieroglyphics, question marks, underscored words, and exclamation points, and these only served more to confuse the poor students as they could not possibly decipher the red marks. It was often said that only God and the Butch (the Number One Executioner) knew our grades and sometimes the Butch did not tell God. Consequently everyone was under a severe nervous strain all the time.

We were told about the Anatomy Department before even entering Medical School, and that in itself was enough to scare some boys out. We were always afraid to ask questions and the only time, with very few exceptions, we had contact with the instructors was when we wanted a bone sawed or when they wanted to ask us questions.

We never had any lectures except a brief lecture on the central nervous system, and at all times it seemed as if they considered it beneath their dignity to help us. At the end of each day the next day's assignment was put on the board. We had our anatomy textbook, dictionary and dissecting instruments and it was up to us to ferret it out for we certainly had no help from them. We were not even allowed to take dissecting manuals to class to get what little help we could get from them.

You cannot imagine how nerve-wracking it was to go through this day-after-day for eight long months without a bit of help from our so-called "teachers". They were more like slave-drivers and seemed to derive a fiendish pleasure from seeing us sweat and squirm under the lash. Not a kind or encouraging word was spoken to any of us except those who licked their boots (this is putting it mildly), and even an occasional encouraging word or attempt to point out something would have worked wonders.

Time was a very important factor in this department. The laboratory doors were opened and the instructors filed in at the exact time each day. The examinations were conducted on a time basis. When the time was up you stopped where you were, whether it was in the middle of a sentence or not. On the practical quizzes we were given thirty seconds only to identify each structure and write it down. A person does not have much time to think under these conditions.

You will notice that I have only mentioned the Anatomy Department in this letter. The other departments throughout the four years of medical school were fair and square with us and seemed to want to teach us something, and lectured and explained and made an effort to enlighten us. It would have been much easier had the Anatomy Department taken that attitude, but I can truthfully say, and so can the rest of my class, that all the anatomy we know was learned without an instructor's help, and I imagine we would know much more had we been taught instead of driven. The preceding classes had the same experience, and I imagine the classes succeeding mine did likewise.

As I said before, I was lucky enough to get through the first year unscathed and am now practicing and am therefore free to speak my mind without fear. I was glad to see your article and am thankful that at last someone has courage to expose this department. I want to congratulate you on stating the facts as they are and I know these facts are true because I have been there myself. This letter I am writing comes not because of a personal grudge but because my sense of fairness tells me that these methods are not right and should be changed.

In closing I might say that I sincerely hope your exposé helps the situation and helps some luckless boys whose whole lives may be ruined by this Anatomy Department. If this communication can be of any help to you I would be only too glad for you to use it and I am willing to help in any way I can. I imagine many others will feel the same way.

Sincerely yours,
C. ASHLEY BIRD, M.D.
Valdosta, Ga., Nov. 13, 1942.

ANOTHER FRONT

Another very vital home front which is usually either completely overlooked or at least given only a faint recognition, is the increasing prevalence and undermining destructiveness during wartime of that old scourge — *tuberculosis*. War and tuberculosis form an axis of their own, and indeed a most formidable one. Total war, as we know it today, with its resulting malnutrition, overcrowding, broken sleep, overwork, disruption of the normal facilities for medical care and the many other hardships, most ably abets its apocalyptic brother in a resurgent reign of silent terror.

The experiences in World War I revealed a sharp rise in the morbidity and mortality rates from tuberculosis, particularly on continental Europe. The ugly footprints of this upsurge were being erased only when the present conflagration engulfed the world.

The few statistical records at present compiled — and the trickle of information trends from Germany and the overrun countries — are clearly indicating a startling increase in this disease. Tuberculosis deaths in England and Wales increased 12 per cent between 1939 - 1941. As deaths from all causes did not advance appreciably in these countries during this period, there is an added significance to this tuberculosis death rate. In Scotland the increase in the tuberculosis death rate was even higher, being 18 per cent between 1939 - 1941. The tuberculosis death rate in Canada, as reported by the Canadian Tuberculosis Association, shows an increase of 5 per cent in 1941 over the rate of 1940. This is the first appreciable increase in the disease to be recorded within 15 years in this country. In Paris tuberculosis deaths during the first six months of 1941 increased 10 per cent over the deaths in the first half of 1939. One French authority has stated, "If the present dietary regime continues and the consequences increase, the problem of tuberculosis in France will be exceedingly grave." Authentic vital statistics out of Germany during the past two or three years are not available, but repeated press reports indicate a pronounced recent increase in tuberculosis. Reports, unconfirmed by authoritative sources, have reached this country of alarming increases in tuberculosis in China, Greece, Poland, and the Low Occupied Countries.

In our country, provisional figures show a slight decrease in the tuberculosis death rate. In 1941 the death rate was 44.4 per 100,000 as compared to 45.9 in 1940. That all efforts to maintain this fine record during the trying months and years ahead be made is the concluding and real message offered here.

There must be *no* let up in the vigilance and thoroughness of the very efficient anti-tuberculosis campaign and programs that have been established in this country. The tubercle bacilli — that vast host of bacillary nazis — brook no laxity. The physicians left behind must continue to keep their forces mobilized on this strategic front, and push the fight unrelentingly. The armed forces, by employing practically universal x-ray examination of inductees, have succeeded well to date in keeping tuberculosis out of their ranks. The rejectees accruing from this policy only adds further to the home-front responsibility. All the tuberculosis agencies should be increasingly supported. At this writing the Christmas Seal Campaign is about to be launched. Sanatoriums must be maintained at full standard, and even more sanatorium beds should be added. In the first years of the war sanatorium beds in England were used for general military purposes. The rapid increase in childhood infection and morbidity which followed, caused a subsequent reversal of this policy. So it is obviously necessary — or rather, it is vitally essential — that all forces engaged in the struggle for the control and eradication of tuberculosis — should, during these critical times, carry on with unremitting vigor, and should receive the able support of both the physicians and the lay public.

Champ H. Holmes, M.D.

TICK PARALYSIS

Report of Case

AUBREY HARPER, M.D.
Wray

Margaret Ramsey, colored, aged 4, was brought to my office July 24, 1942, having a complete paralysis of her lower limbs. This paralysis had developed during the night, as she was apparently well the evening before.

When placed on her feet she would slump to the floor, being unable to walk or stand. Temperature was normal. She did not complain of pain. Knee reflexes absent. The next day a tick well filled with blood was found and removed from the child's scalp by its parents. The day after this the child was entirely well.

With the aid of Dr. Guy V. Rice, Regional Medical Director at Albany, Ga., we were able to make a diagnosis of tick paralysis.

It seems this disease is not frequent in Georgia, or if so, has not been reported. One case in Georgia was reported by Robinow and Carroll, *Journal A.M.A.*, Sept. 17, 1938. They state that "Paralysis seems to occur only after the impregnated female tick has fed for several days on a patient and is probably not due to a living virus but a venom elaborated in the developing ova."

If not recognized and the tick or ticks removed, it is often fatal in children. Tick fever is also found in sheep, dogs and cats.

Upon inquiry, I find the disease is frequently found in dogs in this section of the state. The dog becomes paralyzed; usually his hind legs first. The treatment is to look the dog over and remove all ticks found and presto! the dog in a short time is well!.

A NEW DISEASE ENTITY (?)

(Continued from page 438)

bathing in a little stream, known as Brushy Creek, within seven days of their onset. I have also described what I believe to be a secondary case as a result of a laboratory infection in the only technician who handled the stools sent in from this outbreak. Her infection must have taken place between August 15 and August 25 when she became ill.

Conclusions

1. It would appear that this is a disease entity, probably due to an unknown causative agent.

2. Since bathing in Brushy Creek was the only common factor, water transmission must be considered.

3. The fact that a laboratory technician handling the stools became ill with a similar disease would suggest the presence of the causative agent in the stool.

ANNOUNCEMENT FOR STATE MEDICAL JOURNALS

An intensive educational program on rheumatic fever and heart disease has been launched by the Metropolitan Life Insurance Company with the cooperation and advice of the American Heart Association, the Academy of Pediatrics, and the Crippled Children's Division of the U. S. Children's Bureau.

The purpose of this activity is twofold. Through popular literature, addresses, radio programs, news releases, and advertisements the public will be acquainted with the newer knowledge of rheumatic fever and rheumatic heart disease and their special war-time significance in overcrowded and insanitary environments. The program will stress the importance of early diagnosis, proper care for rheumatic fever victims, and the declining mortality rate among children in the younger age groups. The Metropolitan is using the services of its Field Staff in some three thousand communities, and it expects to reach over a million homes.

An equally important objective of this program will be to distribute to the medical profession up-to-date literature covering various aspects of the rheumatic fever problem. The printed materials for physicians will include a clinical booklet which sets forth in concise form the modern concept of the disease, criteria for its early diagnosis and treatment, methods of managing the disease and recognizing its cardiac involvements. This booklet is being developed in collaboration with special committees of the American Heart Association and the Academy of Pediatrics. The membership of these committees include: Drs. T. Duckett Jones and Edward F. Bland of Boston; Arthur C. DeGraff, Ann G. Kuttner, Homer Swift, and A. T. Martin of New York City; Ethel C. Dunham and O. F. Hedley of Washington, D. C.; Hugh McCulloch, St. Louis; and Stanley Gibson of Chicago. Others being consulted include Dr. May G. Wilson, New York City; Dr. Albert Kaiser, Rochester; Dr. David Rutstein, Albany; and Dr. Elizabeth Huse, Washington, D. C.

This program marks the first time that a national educational campaign has been undertaken to reach the general public and the medical profession with rheumatic fever literature, especially prepared according to the needs and interests of each group.

The Board of Regents of the American College of Physicians has announced the cancellation of their 1943 Annual Session, which was scheduled to be held in Philadelphia, April 13-16, 1943. This action was taken after thoughtful consideration of all factors involved, including an intimation from the Secretary of War and the Office of Transportation that larger national medical groups should not plan meetings at the time set; a growing difficulty in getting speakers and clinicians of top rank to maintain the usual standards of the program; prospect of greatly reduced attendance, because civilian doctors are faced with too great a burden of teaching and practice already; a decreasing active membership, due to approximately 25 per cent of all doctors being called to active military service. President James E. Paullin announced, however, that all other activities of the College would be pursued with even greater zeal,

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*Nominated by their respective district medical societies and appointed for six year terms.

STATE OF GEORGIA AT LARGE

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J. G. Williams, Atlanta, Sept. 1, 1945.

*Nominated by the Georgia Dental Association.

*Pharmaceutical Association**

M. D. Hodges, Marietta, Sept. 1, 1941.
John W. White, Thomasville, Sept. 1, 1947.

*Nominated by the Georgia Pharmaceutical Association.

UROLOGY AWARD

The American Urological Association offers an annual award "not to exceed $500" for an essay (or essays) on the result of some specific clinical or laboratory research in urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, May 31 - June 3, 1943, Hotel Jefferson, St. Louis, Missouri.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 1, 1943.

WAR MANPOWER COMMISSION

To the Editor:

The Directing Board of the Procurement and Assignment Service suggests that you publish the following statement in the next issue of your Journal. The Board deeply appreciates the support, help, and cooperation always received from you.

"It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists, and Veterinarians, immediately has the name of any doctor who really is willing to be dislocated for service, either in industry or in overpopulated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over the age of 45 who wishes to participate in the war effort send in his name to the State Chairman for the Procurement and Assignment Service in his State."

FRANK H. LAHEY, M.D.,
Chairman, Directing Board.

Dr. Donald D. Van Slyke, president of the American Bureau for Medical Aid to China, and a director of United China Relief, has been elected an honorary member of the British Physiological Society, according to a letter just received from London.

"The Society feels that it would be greatly honored to include among its members a physiologist of your distinction and sincerely hope that you will be able to accept honorary membership," writes the secretary of the Society. "The Society continues to meet, although not so regularly as in peace time. We look forward, when this turmoil is over, to welcoming our new honorary member among us, and to being able to share with you the prospect of many years of fruitful work."

Dr. Van Slyke, who is chief chemist at the Rockefeller Institute for Medical Research, received the Kober Medal, one of the highest honors in the medical profession, in May of this year for his contributions to the treatment of Bright's disease and for his work on the oxygen treatment of pneumonia.

Twenty-eight denominations contributed in 1942 to the Church Committee for China Relief, it is reported by Fred Atkins Moore, director of the Committee. New givers this year included the Free Methodists, Friends, Mennonites, Reformed Presbyterians and United Brethren (Old Constitution). Others who have promised cooperation are the Church of the Nazarene, the New Church (Swedenborgian) and the American Advent Christian Church.

Mr. Moore reported that the Southern Baptist War Emergency Council, in answer to the Committee's appeals for famine sufferers in Honan province, had sent a gift of $10,000 on December 1, and had pledged $5.000 a month for the next six months.

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of the
Medical Association of Georgia
for 1942

Names of all Members and Officers are published as corrected by Secretaries of County Societies

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EMERGENCY RESURVEY OF NURSES PLANNED

Who and where are our retired or inactive nurses? This emergency calls for immediate attention to the desperate need for nurses in supplying nursing service to our civilian program as well as to the armed forces.

Doctors and doctors' wives are especially requested to give assistance to the quick resurvey of registered nurses which will begin in January 1943. Help us find these hidden nurses. Doctor, is your wife a nurse? Do you know of an inactive nurse who would return to the field for part-time or full-time work? If so, notify State Headquarters or your Local Nursing Council.

Here is the aim of the plan: To find every nurse by county and to secure her services either part-time or full-time, on voluntary or paid basis. To redistribute nurses in order to supply armed forces as well as civilian programs.

The 1941 National Inventory of Nurses does not serve the need now. The 1943 resurvey will be made on a strictly local basis and used locally. Tabulations of findings will be forwarded to State and National nursing groups.

The District Nursing Councils for War Service will assume responsibility for the resurvey and work closely with a key nurse or nurse deputy from each county in their respective districts in an effort to find and use the services of every nurse in that county. The county key nurse will keep a current list of nurses available for any type work and the hours or days available. The District Nursing Councils will mail a double postal card to every nurse in their files requesting current information as to availability, and then forward lists to the county key nurse. The county key nurse in turn helps to locate hidden nurses in her county and sends lists to the District Council who in turn mails resurvey card to nurse.

Miss Durice Dickerson, Executive Secretary of the State Nursing Council for War Service, will visit each of the eleven districts during December of 1942 to assist the District Nursing Councils in preparing for this resurvey.

The U. S. Public Health Service promotes this activity in cooperation with the National Nursing council for War Service and Subcommittee on Nursing of the Health and Welfare Division.

Sister Mary Cornile, R.S.M., of St. Joseph's Infirmary, Atlanta, is chairman of the Distribution of Nursing Service Committee of the State Nursing Council and requests early tabulations by districts of the total nurses found by county.

It is expected that if the retired or inactive, as well as active nurses, realize the desperate need for this resurvey, 100 per cent cooperation will be secured.

Recruitment Program

Miss Ruth Henley, Chairman of the Recruitment Committee of the State Nursing Council for War Service, Piedmont Hospital, Atlanta, calls attention to a statewide program this committee outlined for recruiting qualified students for the February and September classes of 1943 for our Georgia schools of nursing. High schools and colleges will be visited and motion pictures will be shown by competent speakers in an effort to interest girls in nursing education. "R.N.—Serving All Mankind" is a two reel picture available from the American College of Surgeons and will be offered to theaters, hospitals, medical and nursing organizations, colleges, high schools and other institutions and other audiences, which include young women who might be attracted to a career in nursing.

Thousands of Nurses Still Needed by Army and Navy

"No Greater Glory" is a one reel motion picture narrated by actor Edward Arnold, which pictures all sides of the life of Army and Navy nurses from social activities in officers' clubs to attending the wounded at field hospitals and work of nurses with armed forces on the world's battle fronts. This picture will be shown nationally and by the State Recruitment Committee to groups of nurses in schools, alumni associations and conventions to demonstrate to them the need of the armed forces for medical personnel.

Durice Dickerson, R.N.,
Executive Secretary,
Georgia State Nursing Council
for War Service.

The Journal *would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.*

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NEWS ITEMS

The Georgia Medical Society, Savannah, met on November 10. Dr. P. S. Pelouze spoke on "The Control of Gonorrhea." He is associate professor of urology at the University of Pennsylvania School of Medicine, Philadelphia, Pa.

A meeting of the visiting staff of Grady Hospital, Atlanta, was held on November 10. Dr. Wm. L. Dobes showed, "Kodachrome Pictures of Rare Skin Diseases Observed in Grady Hospital Dermatologic Clinics"; discussed by Dr. Herbert S. Alden. Dr. Jeff L. Richardson is president of the visiting staff; Dr. Eleanor Townsend is chairman of the Program Committee.

The staff meeting of Crawford W. Long Memorial Hospital, Atlanta, was held on November 12. Dr. Harold P. McDonald reported a case of "Bilateral Uretero-intestinal Anastomosis" and presented the patient; Dr. L. G. Baggett led the discussion and presented another patient.

Dr. Needham B. Bateman, Jr., M. C., United States Army, located at the Station Hospital, Camp McCain, Grenada, Mississippi, has been promoted to Major in the Medical Corps.

The Bibb County Medical Society met in Ridley Hall, Macon, November 17. Dr. J. R. B. Branch spoke on "Aseptic Intestinal Anastamosis."

A staff meeting of the Georgia Baptist Hospital, Atlanta, was held on November 17. Dr. J. C. Massee, chairman of the Program Committee, prepared a program on "Addison's Disease."

The Georgia Medical Society, Savannah, met on November 24. The program consisted of a "Panel Discussion on Intestinal Obstruction."

The visiting staff of Grady Hospital, Atlanta, met on December 8. Dr. John R. Lewis, Jr., and Dr. Wm. J. Senter gave "A Review of Osteomyelitis and a Study of 307 Cases," (With Special Reference to the Use of Sulfathiazole). Dr. Charles Ward opened the discussion.

The Sixth District Medical Society met at Christ Church Parish House, Macon, December 9. Titles of scientific papers on the program were: "Some Every Day Gynecologic Problems" by Dr. J. R. B. Branch, Macon; "Some Proctologic Problems," Capt. F. E. Farrar; "An X-Ray Presentation of Urologic Cases," Dr. Max Mass, Macon; "The Selection of Men for Aviation Personnel," Capt. Harwell, Cochran Field; "The Physiologic Effects of Flying," Lieut. Arthur Stern, Robins Field. Other speakers on the program were: Dr. J. A. Redfearn, Albany, President of the Medical Association of Georgia; Dr. W. A. Selman, Atlanta, President-elect; Dr. Edgar D. Shanks, Atlanta, Secretary-Treasurer. Officers of the Society are Dr. C. H. Richardson and Dr. A. M. Phillips, both of Macon.

Dr. Frank C. Johnson announces the removal of his offices to the Doctors Building, 478 Peachtree St., N. E., Atlanta.

The Bibb County Medical Society met in Ridley Hall, Macon, December 1. This was the society's annual business meeting and officers were elected.

Dr. Tulley Talbot Blalock announces the opening of his office in association with Dr. Cyrus W. Strickler at 123 Forrest Avenue, N. E., Atlanta. Practice will be limited to internal medicine.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, December 7. Dr. Homer S. Swanson spoke on "The Relief of Pain by Neurosurgical Methods"; Dr. Wm. A. Smith talked on "Recurrent Convulsions and Allied Disorders." Nominations were made for the following officers to serve through terms as listed: President-Elect for one year; Vice-President for one year; three members of the Board of Trustees to serve for one, two and three years, respectively; three delegates for two years, respectively; seven alternate delegates to serve two for two years and five for one year, respectively.

The Georgia Pediatric Society held its Tenth Annual Scientific Meeting at the Academy of Medicine, Atlanta, on December 10. The program was filled by outstanding physicians from the cities of Cincinnati, Chicago and New York City, who are skilled in the practice of pediatrics. They were introduced by the following: Dr. C. Hall Farmer, Macon; Dr. Joseph Yampolsky, Atlanta; Dr. Wallace L. Bazemore, Macon; Dr. Wm. Kiser, Jr., Atlanta. Addresses of Welcome by Dr. Major F. Fowler and Dr. Wm. Willis Anderson, both of Atlanta.

The Student Council of Oglethorpe University School of Medicine presented its second lecture at the Academy of Medicine on December 11. The address on "Bone and Joint Surgery in Warfare" was delivered by Dr. Fred H. Albee, New York City. Dinner was served in the dining room from 6:30 to 8:00 P.M.

The staff of Crawford W. Long Memorial Hospital, Atlanta, met on December 10. Dr. Ralph Mosteller reported a case of "Hypertrophic Cirrhosis of the Liver"

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OBITUARY

Dr. Charles White Churchill, Thomson; member; University of Georgia School of Medicine, Augusta, 1909; aged 64; died on October 26, 1942, of heart disease at his home. He was a native of Richmond county and a descendant of the pioneer Churchill family from England. In reply to a question last year, he stated that, "I am a third cousin of Winston Churchill of England, if he wins the war and no relation to him, if he loses." When he graduated in medicine, he began practice at Wrens and continued until 1918, then practiced in Augusta until 1933 and at Thomson until his death. He was a member of the McDuffie County Medical Society, Masonic Lodge and the Thomson Methodist church. He served as county physician and local surgeon for the Georgia Railroad for many years. The *Augusta Herald* published among other things that Dr. Churchill was one of the most popular men in Thomson and active in civic and church affairs. Surviving him are one son, Charles Hart Churchill, Evans, Ga.; two daughters, Mrs. Harry L. Cheves, Union Point, and Mrs. Natalie Williams, Thomson. Rev. A. L. Gilmore, Rev. J. D. Matheson and Rev. William Howard officiated at the funeral services conducted at the Methodist church. Burial was in the Wrens City cemetery.

Dr. William P. Shelly, Albany; member; Louisville Medical College, Louisville, Ky., 1878; aged 86; died on October 23, 1942. He was born in Webster County. He was favorably known by hundreds of acquaintances. He was an active member of the Randolph County Medical Society for years during the noted career of the late Dr. G. Y. Moore, past president of the Medical Association of Georgia, and an active member of the Cuthbert Baptist church. Dr. Shelly practiced medicine for 50 years. He began in New Mexico, then moved to El Paso, Texas, thence to Cuthbert and later to Albany. Surviving him are four daughters, Mrs. W. B. Haley, Miss Pauline Shelly, and Mrs. George Sheppard, all of Albany, and Mrs. J. M. Heflin, Denver, Colorado. Rev. J. Ed Fain officiated at the funeral services conducted at the home of his daughter, Mrs. Haley. Burial was in the Benevolence cemetery.

Dr. James Thomas Henley, Douglasville; member; Atlanta College of Physicians and Surgeons, Atlanta, 1900; aged 72; died on October 27, 1942, at his old home where he was born near Douglasville. He was a graduate of Means Military Institute, now Gordon Institute, and was commanding officer of Base Hospital No. 11 in France during Warld War I. Dr. Henley was a member of the College Park Methodist church. He retired from practice in 1937. Surviving him are his widow and two sisters, Mrs. H. A. Bomar and Mrs. J. B. Campbell.

Dr. Charles Cowdrey Fitts, Carrollton; member; Emory University School of Medicine, Emory University, 1917; aged 48; died on November 8, 1942, at a private hospital in Carrollton. He served an internship at St. Joseph's Infirmary, Atlanta, and at St. Joseph's Hospital, Savannah, then enlisted in military service in World War I as a first lieutenant. Immediately, he began the private practice of medicine about the time his father retired on account of declining health. His father, Dr. William Lee Fitts, and his paternal grandfather, Dr. W. W. Fitts. The family of doctors were known extensively, as well as the Fitts' Drug Store, owned and operated by the older members of the family. Dr. Fitts was one of the organizers of the Carrollton Clinic and chief surgeon since 1929, was chairman of the Carrollton Board of Health, member of the Carroll County Medical Society, Rotary Club, and Past Master of Carroll Lodge No. 69, F. & A. M. Surviving him are his widow, a daughter, Miss Mary Ellen Fitts; two sons, Charles C. Fitts, Jr., and Thomas Fitts, all of Carrollton. Rev. Milton Richardson, Rev. Zach Hayes, and Rev. E .H. Hamilton officiated at the funeral services conducted at the chapel of Kytle-Aycock Funeral Home. The physicians of Carrollton, Bremen, Bowdon and the registered nurses of the Carrollton Clinic formed an honorary escort. Burial was in Carrollton cemetery.

Dr. William Pickens Harbin, Sr., Rome; member; Bellevue Hospital Medical School, New York City, 1897; aged 70; died November 4, 1942, of heart disease in his office. He was a native of Gordon County. He graduated from the University of Georgia, Athens, in 1894. After he gradnated in medicine he became associated in the practice of medicine with the late Dr. R. M. Harbin, his brother, then served for one and one-half years as acting assistant surgeon-general in the United States Army, and again he became associated with his brother in practice. The Harbin Hospital at Rome was established by the

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Evans, Mrs. E. Lea, 18th St., Tifton.
Fleming, Mrs. Carlton A., Hall Ave., Tifton.
Harrell, Mrs. D. B., North Central Ave., Tifton.
Hendricks, Mrs. W. H., Love Ave., Tifton.
Jones, Mrs. Robert E., North Central Ave., Tifton.
LeRoy, Mrs. Albert G., North Ridge Ave., Tifton.
Peterson, Mrs. Nick, Love Ave., Tifton.
Pittman, Mrs. Carl S., 12th St., Tifton.
Price, Mrs. J. M., North Central Ave., Tifton.
Smith, Mrs. William T., Park Ave., Tifton.
Webb, Mrs. W. M., 12th St., Tifton.
Zimmerman, Mrs. W. F., Murray Ave., Tifton.

THIRD DISTRICT

Manager—Mrs. J. L. Gallemore.....Perry

Dodge County

President—Mrs. I. J. Parkerson.....Eastman

Members

Coleman, Mrs. Warren A., Eastman.
Parkerson, Mrs. I. J., Eastman.
Smith, Mrs. E. L., Eastman.
Wall, Mrs. J. Cox, Eastman.

Peach-Houston Counties

President—Mrs. R. L. Cater.....Perry

Members

Cater, Mrs. R. L., Perry.
Gallemore, Mrs. J. L., Perry.
Hendricks, Mrs. A. G., Perry.

Macon County

President—Mrs. H. C. Derrick.....Oglethorpe

Members

Cheves, Mrs. Langdon C., Montezuma.
Derrick, Mrs. Howard C., Oglethorpe.
Greer, Mrs. Charles A., Oglethorpe.
Liggin, Mrs. Sam B., Montezuma.
Savage, Mrs. Carl P., Montezuma.

Muscogee County

President—Mrs. W. L. Cooke.....Columbus

Members

Berry, Mrs. Arthur, 912 Benning Blvd., Columbus.
Blackmar, Mrs. Frances, 1243 Forest Ave., Columbus.
Brannon, Mrs. O. C., 1318 Starke Ave., Columbus.
Cock, Mrs. W. C., 926 Benning Ave., Columbus.
Cooke, Mrs. W. L., 2110 Oak Ave., Columbus.
Dillard, Mrs. Guy, 1919 Flourney Drive, Columbus.
Gilliam, Mrs. O. D., 1715 Carter Place, Columbus.
Jenkins, Mrs. W. F., Dixon Drive, Columbus.
Jones, Mrs. W. R., 2804 18th Ave., Columbus.
Mayher, Mrs. W. E., Dinglewood, Columbus.
McDuffie, Mrs. J. H., 1304 E. 10th St., Columbus.
Murray, Mrs. G. S., Dinglewood, Columbus.
Schley, Mrs. Frank, 1352 Peacock, Columbus.
Spikes, Mrs. J. L., Peacock Woods, Columbus.
Storey, Mrs. W. E., Macon Road, Columbus.
Thompson, Mrs. John, 1916 Garrard St., Columbus.
Thrash, Mrs. J. A., Chatulga Road, Columbus.
Threatte, Mrs. Bruce, 1505 Eberhart, Columbus.
Tillery, Mrs. Bert, 1544 Cherokee Drive, Columbus.
Venable, Mrs. D. R., 812 Fulton, Columbus.
Walker, Mrs. J. E., Green Island Hills, Columbus.
Willis, Mrs. Neal, 1240 Cedar Ave., Columbus.
Winn, Mrs. John, 3 Park Drive, Columbus.
Youmans, Mrs. J. R., 1600 Boulevard St., Columbus.

Randolph-Terrell Counties

President—Mrs. T. F. Harper.....Coleman

Members

Arnold, Mrs. J. T., Parrott.
Crook, Mrs. W. W., Cuthbert.
Elliott, Mrs. W. G., Cuthbert.
Gary, Mrs. Loren, Sr., Georgetown.
Harper, Mrs. T. F., Coleman.
Ingram, Mrs. H. R., Coleman.
Martin, Mrs. F. M., Shellman.
Massengale, Mrs. L. R., Lumpkin.
McCurdy, Mrs. E. C., Shellman.
Patterson, Mrs. J. C., Cuthbert.
Rogers, Mrs. F. S., Coleman.
Sims, Mrs. A. R., Richland.
Tidmore, Mrs. J. C., Dawson.

SUMTER COUNTY

President—Mrs. Russell Thomas.....Americus

Members

Adkins, Mrs. H. T., 1107 Hancock Drive, Americus.
Avary, Mrs. Arch. Ellaville.
Enzor, Mrs. R. H., Smithville.
Schley, Mrs. Gatewood T., 214 Taylor St., Americus.
Primrose, Mrs. A. C., 801 Hancock St., Americus.
Pendergrass, Mrs. R. C., 144 Taylor St., Americus.
Scruggs, Mrs. S. A., 813 Hancock St., Americus.
Smith, Mrs. Herechel A., 601 S. Lee St., Americus.
Stukes, Mrs. J. T., 1521 McGarrah St., Americus.
Russell, Mrs. Thomas, 140 Taylor St., Americus.
Wood, Mrs. Kenneth, Leslie.

FOURTH DISTRICT

Manager—None.

LAMAR COUNTY

President—Mrs. J. H. Jackson.....Barnesville

Members

Anderson, Mrs. John Martin, Thomaston St., Barnesville.
Corry, Mrs. John A., Holmes St., Barnesville.
Jackson, Mrs. James Holland, Georgia Ave., Barnesville.
Pritchett, Mrs. DeWitt, Thomaston St., Barnesville.
Suggs, Mrs. Clarence E., Sr., Greenwood St., Barnesville.
Traylor, Mrs. Stell Blake, Stafford Ave., Barnesville.
Willis, Mrs. Clarence H., Thomaston St., Barnesville.

FIFTH DISTRICT

Manager—Mrs. J. Harry Rogers.....Atlanta

FULTON COUNTY

President—Mrs. Edgar H. Greene.....Atlanta

Members

Agnor, Mrs. Elbert B., 1302 N. Morningside Dr., Atlanta.
Allen, Mrs. Eustace A., 18 Collier Rd., N. W., Atlanta.
Anderson, Mrs. A. B., 283 E. Wesley Rd., N. E., Atlanta.
Anderson, Mrs. W. W., 63 Avery Dr., N. E., Atlanta.
Archer, Mrs. George F., 512 Manor Ridge Dr., N. E., Atlanta.
Armstrong, Mrs. W. B., 2795 Peachtree Rd., N. E., Atlanta.
Arp, Mrs. Raymond, 88 Woodsy Way, Atlanta.
Arthur, Mrs. J. F., 1181 Briarcliff Pl., N. E., Atlanta.
Askew, Mrs. H. H., 1329 Springdale Rd., N. E., Atlanta.
Aven, Mrs. C. C., 2310 Gordon Rd., Atlanta.
Ayer, Mrs. Guy D., 563 Paces Ferry Rd., N. W., Atlanta.
Baggett, Mrs. Leland, 79 Brighton Rd., Atlanta.
Baker, Mrs. L. P., 52 Seventeenth St., N. E., Atlanta.
Bancker, Mrs. Evert A., Jr., 2810 Club Drive, N. W., Atlanta.
Barfield, Mrs. Forrest, Andrews Drive, N. W., Atlanta.
Barnett, Mrs. Crawford, 900 Myrtle St., Atlanta.
Barnett, Mrs. S. T., 1746 Pine Ridge Dr., N. E., Atlanta.
Bateman, Mrs. Needham B., 88 Woodsy Way, Atlanta.
Benson, Mrs. H. Bagley, 1241 Briarwood Rd., N. E., Atlanta.
Benson, Mrs. Marion T., 1040 Springdale Rd., N. E., Atlanta.
Bivings, Mrs. Lee, 3110 Hahersham Rd., N. E., Atlanta.
Bivings, Mrs. W. Troy, 1860 Flagler Ave., N. E., Atlanta.
Blackman, Mrs. W. W., 284 West Andrews Drive, N. W., Atlanta.
Blalock, Mrs. J. C., 734 Wesley Road, W., Atlanta.
Bleich, Mrs. J. Kelvin, 1050 Ponce de Leon Ave., N. E., Atlanta.
Boland, Mrs. Charles G., 120 Lindberg Dr., N. E., Atlanta.
Boland, Mrs. F. Kells, Jr., 1460 Peachtree, Apt. A-1, Atlanta.
Boland, Mrs. F. K., 252 Peachtree Circle, N. E., Atlanta.
Boland, Mrs. Joe H., 1355 Peachtree St., N. E., Atlanta.
Boyd, Mrs. Hartwell, 263 The Prado, N. E., Atlanta.
Brawner, Mrs. James N., 2800 Peachtree Road, N. E., Atlanta.
Brawner, Mrs. Jas. N., Jr., 193 Bolling Rd., N. E., Atlanta.
Brown, Mrs. R. Ross, 1000 Peachtree Battle Ave., Atlanta.
Brown, Mrs. Stephen T., 1088 Oxford Rd., N. E., Atlanta.
Bunce, Mrs. Allen H., 368 Ponce de Leon Ave., N. E., Atlanta.
Burch, Mrs. J. C., 150 Anderson Ave., S. W., Atlanta.
Burke, Mrs. B. Russell, 1996 Ponce de Leon Ave., N. E., Atlanta.
Bridges, Mrs. Glenn J., 2410 Glenwood Avenue, S. E., Atlanta.
Byrd, Mrs. T. Luther, 1752 N. Pelham Rd., N. E., Atlanta.
Calhoun, Mrs. F. P., 2906 Andrews Dr., N. W., Atlanta.
Campbell, Mrs. J. L., 1315 Fairview Rd., N. E., Atlanta.
Candler, Mrs. Robert W., 2498 Mountainview Dr., N. W., Atlanta.
Cathcart, Mrs. Don F., 1792 Flagler Ave., N. W., Atlanta.
Childs, Mrs. J. R., 1955 Ponce de Leon Ave., N. E., Atlanta.
Clark, Mrs. James J., 1031 Springdale Rd., N. E., Atlanta.
Cofer, Mrs. Olin S., 943 Lullwater Rd., N. E., Atlanta.
Cohen, Mrs. Isidore R., 354 Loomis Ave., S. E., Atlanta.
Cooke, Mrs. Virgil C., Bakers Ferry Rd., Atlanta.
Collier, Mrs. T. J., 1781 Peachtree St., N. W., Atlanta.
Cousins, Mrs. W. L., Clarkston.
Coppedge, Mrs. W. W., 313 Kimmeridge Dr., East Point.
Crawford, Mrs. H. C., Pine Valley Road, Atlanta.
Crawford, Mrs. J. H., 2515 Brookwood Drive, Atlanta.
Crowe, Mrs. W. R., 1069 Virginia Ave., Atlanta.
Curtis, Mrs. Walker L., 302 W. Rugby Ave., College Park.
Daly, Mrs. Leo P., 360 Ponce de Leon Ave., Atlanta.
Daniel, Mrs. Chas. H., College Park.
Daniel, Mrs. W. W., 1705 Pelham Rd., N. E., Atlanta.
Daniels, Mrs. Chas. W., 817 W. Peachtree St., Atlanta.
Davenport, Mrs. T. F., 1038 Peachtree Battle Avenue, Atlanta.
Davison, Mrs. Hal M., 85 Avery Drive, N. E., Atlanta.
Davison, Mrs. T. C., 1414 Lanier Place, N. E., Atlanta.

Denton, Mrs. John F., 1503 Peachtree St., N. E., Atlanta.
Dew, Mrs. J. Harris, 2554 Peachtree Rd., N. W., Atlanta.
Dorough, Mrs. W. S., 344 Ponce de Leon Ave., Atlanta.
Dougherty, Mrs. M. S., 76 Brighton Rd., N. W., Atlanta.
Dowman, Mrs. Chas. E., 721 Keith Ave., Anniston, Alabama.
Duncan, Mrs. John B., West Paces Ferry Rd., N. W., Atlanta.
Dunn, Mrs. W. M., 2801 Andrews Dr., N. W., Atlanta.
DuVall, Mrs. W. Beecher, 905 Cascade Avenue, S. W., Atlanta.
Edgerton, Mrs. M. T., 788 Penn Ave., N. E., Atlanta.
Equen, Mrs. Murdock, 2505 Habersham Road, N. W., Atlanta.
Ferguson, Mrs. Ira A., 353 Argonne Drive, Atlanta.
Fischer, Mrs. L. C., 38 Linden Ave., Atlanta.
Floyd, Mrs. J. T., 791 Greenwood Ave., N. E., Atlanta.
Foster, Mrs. Kimsey E., College Park.
Fowler, Mrs. C. Dixon, 970 E. Rock Springs Rd., Atlanta.
Frierson, Mrs. N., Jr., 1302 West Peachtree St., N. W., Atlanta.
Fuller, Mrs. George W., 1384 Fairview Road, N. E., Atlanta.
Funke, Mrs. John, 343 Fourth St., N. E., Atlanta.
Funkhouser, Mrs. W. L., 2419 Woodward Way, N. W., Atlanta.
Gay, Mrs. T. Bolling, 76 Montgomery Ferry Dr., Atlanta.
Gay, Mrs. J. Gaston, Howell Mill Road, Atlanta.
Goodwyn, Mrs. Thomas P., 2480 Woodward Way, N. W., Atlanta.
Greene, Mrs. E. H., 156 Huntington Rd., N. W., Atlanta.
Hackney, Mrs. J. F., 1110 Bouldercrest Drive, N. E., Atlanta.
Hailey, Mrs. Howard, 2811 Andrews Dr., N. W., Atlanta.
Hamm, Mrs. Wm. G., 2877 Habersham Road, N. W., Atlanta.
Hanner, Mrs. Jas. P., 48 Park Lane, N. E., Atlanta.
Hauck, Mrs. A. E., 99 Princeton Way, N. E., Atlanta.
Hobby, Mrs. A. Worth, 1740 Meadowdale Ave., Atlanta.
Hodgson, Mrs. Fred G., 851 Clifton Rd., N. W., Atlanta.
Holloway, Mrs. Geo. A., 524 Manor Ridge Dr., N. W., Atlanta.
Holden, Mrs. F. C., 1256 N. Morningside Dr., Atlanta.
Holmes, Mrs. Walter R., 95 Peachtree Circle, N. E., Atlanta.
Horton, Mrs. B., 1287 Oxford Road, N. E., Atlanta.
Howard, Mrs. Charles, 795 Kennolia Dr., S. W., Atlanta.
Howell, Mrs. Guy C., 1123 Berkshire Rd., N. E., Atlanta.
Howell, Mrs. Stacy C., 2641 Acorn Ave., N. E., Atlanta.
Huguley, Mrs. G. Pope, 14 Brookhaven Drive, Atlanta.
Hurt, Mrs. John S., 1655 Ponce de Leon Ave., Atlanta.
Jennings, Mrs. Jas. L., 684 Elkmont Drive, N. E., Atlanta.
Jernigan, Mrs. Walker, 532 Redland Road, Atlanta.
Johnson, Mrs. McClaren, 23 Collier Road, N. W., Atlanta.
Jones, Mrs. Jack W., W. Paces Ferry Road, Atlanta.
Kirkland, Mrs. Spencer A., 106 Peachtree Battle Ave., Atlanta.
Kiser, Mrs. Wm. H., Jr., 210 Peachtree Circle, N. E., Atlanta.
Klugh, Mrs. Geo. F., 395 Tenth St., N. E., Atlanta.
Kracke, Mrs. Roy R., 441 Clairmont Ave., Decatur.
Landham, Mrs. Jackson W., 4199 Club Drive, N. W., Atlanta.
Lange, Mrs. J. Harry, 2870 Arden Road, N. W., Atlanta.
Laws, Mrs. Clarence L., 3209 Habersham Road, N. W., Atlanta.
Linch, Mrs. A. O., 943 Rosedale Road, N. E., Atlanta.
Logue, Mrs. R. Bruce, 145 Westminster Drive, N. E., Atlanta.
Lowance, Mrs. Mason I., 877 W. Wesley Rd., Atlanta.
Lower, Mrs. Emory G., 618 Myrtle St., N. E., Atlanta.
Lunsford, Mrs. Guy C., 1154 Virginia Ave., N. E., Atlanta.
Major, Mrs. Robert C., 878 Rock Springs Road, Atlanta.
Mashburn, Mrs. Chas. M., LaVista Road, Atlanta.
Matthews, Mrs. O. H., 61 Barksdale Drive, Atlanta.
Matthews, Mrs. W. B., 186 Avery St., Atlanta.
Maulding, Mrs. Homer R., 659 Peachtree St., N. E., Atlanta.
McDonald, Mrs. Harold P., 1147 Briarcliff Road, N. E., Atlanta.
McDougall, Mrs. Calhoun, 2899 Andrews Drive, Atlanta.
McDougall, Mrs. Wm. L., 275 Blackland Road, N. W., Atlanta.
McRae, Mrs. Floyd W., 3053 Habersham Road, Atlanta.
Merrill, Mrs. Arthur J., 3555 Nancys Creek Rd., Atlanta.
Mims, Mrs. F. Cortez, 1638 North Decatur Rd., N. E., Atlanta.
Minnich, Mrs. Fred R., 1140 W. Paces Ferry Rd., Atlanta.
Minnich, Mrs. Wm. R., 21 Vernon Road, Atlanta.
Minor, Mrs. Henry W., 4455 Peachtree Dunwoody Rd., Atlanta.
Mitchell, Mrs. Marvin A., 505 Manor Ridge Drive, N. W., Atlanta.
Monfort, Mrs. J. M., 3870 Club Drive, N. W., Atlanta.
Malone, Mrs. O. T., 933 Dill Ave., S. W., Atlanta.
Manget, Mrs. J. D., 843 Ponce de Leon Ave., Atlanta.
McCay, Mrs. C. G., 136 Clairmont Ave., Decatur.
Nabers, Mrs. Dewey T., 2380 Dellwood Dr., N. W., Atlanta.
Nall, Mrs. J. D., 1029 Rosedale Road, N. E., Atlanta.
Newberry, Mrs. R. E., 2160 Ponce de Leon Ave., Atlanta.
Nicolson, Mrs. Wm. Perrin, 821 Piedmont Ave., N. E., Atlanta.
Nippert, Mrs. Philip H., 2214 Virginia Place, N. E., Atlanta.
Noble, Mrs. Geo. H., Georgian Terrace Hotel, Atlanta.
Paullin, Mrs. J. E., 2834 Andrews Drive, N. W., Atlanta.
Pentecost, Mrs. Mark P., 3081 West Pine Valley Road, Atlanta.
Perry, Mrs. Sam W., 1013 Ponce de Leon Ave., Atlanta.
Phillips, Mrs. Hayward S., 1738 Homestead Ave., Atlanta.
Pinson, Mrs. C. H., Hapeville.
Pittman, Mrs. James L., 2966 Howell Mill Road, Atlanta
Poer, Mrs. D. Henry, 67 The Prado, Atlanta.
Powell, Mrs. Vernon E., 10 Vernon Road, N. W., Atlanta.
Pruitt, Mrs. Marion C., Briarcliff Road, Atlanta.
Quillian, Mrs. W. Earl, 986 Ponce de Leon Ave., Atlanta.
Read, Mrs. Ben S., 993 Stovall Blvd., Atlanta.
Read, Mrs. Joseph C., 3970 Vermont Road, Atlanta.
Reed, Mrs. Clinton C., Henry Grady Hotel, Atlanta.
Reynolds, Mrs. Herbert L., 211 The Prado, Atlanta.
Rhodes, Mrs. C. A., 129 Brighton Road, Atlanta.
Richardson, Mrs. Jeff L., 969 Clifton Rd., N. E., Atlanta.
Rieser, Mrs. Charles, 1633 Paces Ferry Road N. W., Atlanta.
Roberts, Mrs. C. W., 1085 St. Charles Place, Atlanta.

Roberts, Mrs. Hines, 1268 Piedmont Ave., N. E., Atlanta.
Rogers, Mrs. J. Harry, 134 Huntington Road, N. W., Atlanta.
Rosenberg, Mrs. H. J., 846 Briarcliff Rd., N. E., Atlanta.
Rouglin, Mrs. Louis C., 1050 Ponce de Leon Ave., Atlanta.
Rushin, Mrs. Chas E., 50 Camden Road, N. W., Atlanta.
Sage, Mrs. Dan Y., 47 Inman Circle, N. E., Atlanta.
Sanders, Mrs. A. S., 1660 N. Emory Rd., N. E., Atlanta.
Sauls, Mrs. H. Cliff, 2887 Howell Mill Road, Atlanta.
Shackleford, Mrs. B. L., 2665 Arden Rd., N. W., Atlanta.
Selman, Mrs. W. A., 760 Penn Ave., N. E., Atlanta.
Shaclkeford, Mrs. B. L., 2665 Arden Rd., N. W., Atlanta.
Shanks, Mrs. Edgar D., 1431 Fairview Road, N. E., Atlanta.
Sloan, Mrs. W. P., 1283 Oakdale Road, N. E., Atlanta.
Smith, Mrs. Carter, 104 West Wesley Road, Atlanta.
Smith, Mrs. Linton, 365 Mayson Ave., N. E., Atlanta.
Smith, Mrs. Randolph, 37 LaFayette Dr., N. E., Atlanta.
Smith, Mrs. Simon H., 1291 Emory Road, N. E., Atlanta.
Smith, Mrs. Wm. A., 2956 Lenox Road, N. E., Atlanta.
Staton, Mrs. T. R., 141 Seventeenth St., Atlanta.
Stewart, Mrs. Calvin B., 904 Peachtree St., N. E., Atlanta.
Stone, Mrs. Chas. F., Jr., 42 Peachtree Place, N. E., Atlanta.
Strickler, Mrs. Cyrus W., 871 Oakdale Road, N. E., Atlanta.
Swanson, Mrs. Cosby, 10 Cherokee Road, Atlanta.
Thomason, Mrs. C. G., 603 Jefferson Ave., East Point.
Thompson, Mrs. D. O., 1 Brookhaven Drive, Atlanta.
Tidmore, Mrs. T. L., 963 Plymouth Road, N. E., Atlanta.
Trimble, Mrs. Wm. H., 715 Flat Shoals Ave., S. E., Atlanta.
Tulisalo, Mrs. O. W., 1747 Johnson Road, N. E., Atlanta.
Turk, Mrs. L. N., Jr., 1516 N. Morningside Dr., Atlanta.
Turner, Mrs. John W., 157 Seventeenth St., N. E., Atlanta.
Upchurch, Mrs. W. E., 2774 Atwood Road, N. E., Atlanta.
Upshaw, Mrs. C. B., 394 Wesley Road, W., Atlanta.
Van Dyke, Mrs. A. H., 2440 Peachtree Road, N. W., Atlanta.
Warren, Mrs. Wm. C., Jr., 980 Briarcliff Road, N. E., Atlanta.
Waters, Mrs. W. C., Jr., 878 Virginia Ave., N. E., Atlanta.
Weinberg, Mrs. Jas. I., 949 Courtenay Dr., N. E., Atlanta.
Wells, Mrs. W. Frank, Hapeville.
West, Mrs. C. M., 1659 Pelham Road, N. E., Atlanta.
White, Mrs. J. Bonar, 769 Penn Ave., N. E., Atlanta.
Willingham, Mrs. T. Irvin, 20 Highland Drive, N. E., Atlanta.
Wilson, Mrs. Richard B., 1355 Peachtree St., N. E., Atlanta.
Wolff, Mrs. Bernard P., 48 Peachtree Pl., N. E., Atlanta.
Wood, Mrs. R. Hugh, 1657 Harvard Road, N. E., Atlanta.
Wright, Mrs. Edward S., Howell Mill Road, N. W., Atlanta.
Yampolsky, Mrs. Jos., 746 Brookridge Drive, N. E., Atlanta.

SIXTH DISTRICT

Manager—Mrs. J. B. Dillard..... Davisboro

BALDWIN COUNTY

President—Mrs. Richard Binion.....Milledgeville

Members

Allen, Mrs. H. D., Jr., Allen's Invalid Home, Milledgeville.
Allen, Mrs. E. W., Allen's Invalid Home, Milledgeville.
Anderson, Mrs. S. A., State Hospital, Milledgeville.
Bailey, Mrs. L. A., N. Columbia St., Milledgeville.
Binion, Mrs. Richard, 310 W. Green St., Milledgeville.
Bostick, Mrs. W. A., State Hospital, Milledgeville.
Bradley, Mrs. J. D., State Hospital, Milledgeville.
Cary, Mrs. H. R., N. Jefferson St., Milledgeville.
Clodfelter, Mrs. T. C., State Hospital, Milledgeville.
Cox, Mrs. C. G., State Hospital, Milledgeville.
Echols, Mrs. G. L., State Hospital, Milledgeville.
Fulghum, Mrs. C. B., N. Jefferson St., Milledgeville.
Garrard, Mrs. J. I., State Hospital, Milledgeville.
Howard, Mrs. C. L., N. Columbia St., Milledgeville.
Longino, Mrs. L. P., State Hospital, Milledgeville.
Mitchell, Mrs. Frank, Jr., State Hospital, Milledgeville.
Richardson, Mrs. C. H., N. Columbia St., Milledgeville.
Schwall, Mrs. E. W., State Hospital, Milledgeville.
Walker, Mrs. E. Y., N. Jefferson St., Milledgeville.
Walker, Mrs. N. P., W. Green St., Milledgeville.
Woods, Mrs. O. C., N. Jefferson St., Milledgeville.
Yarbrough, Mrs. Y. H., State Hospital, Milledgeville.

BIBB COUNTY

President—Mrs. Carl Anderson, 250 College St., Macon

Members

Aldrich, Mrs. F. N., Shirley Hills, Macon.
Anderson, Mrs. Carl, 280 College St., Macon.
Anderson, Mrs. J. C., 106 Stanislaus Circle, Macon.
Applewhite, Mrs. J. D., 565 College St., Macon.
Atkinson, Mrs. Harold, 206 Corbin Ave., Macon.
Bashinski, Mrs. Ben, 120 Buford Place, Macon.
Baxley, Mrs. W. W., 1211 Vineville Ave., Macon.
Bazemore, Mrs. Wallace, 127 Beverly Place, Macon.
Boswell, Mrs. W. C., 322 Buford Place, Macon.
Chrisman, Mrs. W. W., 112 Corbin Ave., Macon.
Clay, Mrs. Emory, 116 Hines Terrace, Macon.
Corn, Mrs. Ernest, 555 College St., Macon.
Farmer, Mrs. Hall, 118 Pio Nona Ave., Macon.
Fountain, Mrs. James, Shirley Hills, Macon.
Hall, Mrs. John I., Palasades Apt., Macon.
Harber, Mrs. G. Dillard, Nottingham Drive, Macon.
Harrold, Mrs. Charles C., 550 Orange St., Macon.
Harrold, Mrs. Thomas, Jr., 567 College St., Macon.
Henderson, Mrs. D. T., Vineville Court, Macon.
Hinton, Mrs. C. C., 2514 Forsyth Road, Macon.
Holmes, Mrs. J. P., 252 Overlook Ave., Macon.
Keen, Mrs. O. F., 117 Rogers Ave., Macon.
King, Mrs. J. L., 223 Buford Place, Macon.
McAllister, Mrs. R. W., 922 Ingleside Ave., Macon.
McLaughlin, Mrs. Charles, 98 Ingleside Ave., Macon.
Mass, Mrs. Max, 115 Pio Nona Ave., Macon.
Mobley, Mrs. Walter, 563 College St., Macon.
Newman, Mrs. W. A., 571 Orange St., Macon.
Newton, Mrs. Ralph, 217 Buford Place, Macon.
Patton, Mrs. Sam, 101 Lamar St., Macon.
Philips, Mrs. A. M., 109 Buford Place, Macon.
Porch, Mrs. Leon, 240 Riverdale Drive, Macon.
Rawls, Mrs. Lewis, 104 Florida Ave., Macon.
Reifler, Mrs. R. M., Terrace Apt., Macon.

Richardson, Mrs. Charles H., 359 Cherokee Ave., Macon.
Richardson, Mrs. Rhea, 2516 Forsyth Road, Macon.
Rogers, Mrs. T. E., 120 Clisby Place, Macon.
Ross, Mrs. Thomas L., 310 Nottingham Drive, Macon.
Rozar, Mrs. A. R., Shirley Hills, Macon.
Smith, Mrs. Allen, 106 Florida Ave., Macon.
Thompson, Mrs. O. R., 112 Pio Nona Ave., Macon.
Walker, Mrs. D. D., 120 Stanislaus Circle, Macon.
Ware, Mrs. Ford, Overlook Drive, Macon.
Wasden, Mrs. C. N., 308 Clayton Ave., Macon.
Weaver, Mrs. H. G., 120 Callaway St., Macon.
Weaver, Mrs. O. H., 702 Ridge Ave., Macon.
Williams, Mrs. W. A., 240 Stanislaus Circle, Macon.
Woods, Mrs. C. J., 179 North Ave., Macon.

WASHINGTON COUNTY

President—Mrs. J. B. Dillard Davisboro

Members

Cason, Mrs. W. M., 4611 French Ave., Jacksonville, Fla.
Dillard, Mrs. J. B., Davisboro.
Harris, Mrs. Eugene, Sandersville.
Helton, Mrs. B. L., Sandersville.
King, Mrs. W. R., Tennille.
Lennard, Mrs. O. D., Tennille.
Lozier, Mrs. N., Sandersville.
Newsome, Mrs. Emory G., Sandersville.
Newsome, Mrs. N. J., Sandersville.
Overby, Mrs. N., Sandersville.
Peacock, Mrs. E. S., Sandersville.
Rawlings, Mrs. F. B., Sandersville.
Rogers, Mrs. O. L., Sandersville.
Taylor, Mrs. R. L., Davisboro.

SEVENTH DISTRICT

Manager—Mrs. J. E. Billings Calhoun

COBB COUNTY

President—Mrs. L. L. Welch Marietta

Members

Allen, Mrs. George Q., 1005 Cherokee Ave., Marietta.
Benson, Mrs. Regina Rambo, 406 Whitlock Ave., Marietta.
Elder, Mrs. C. D., 200 Seminole Drive, Marietta.
Fowler, Mrs. Ralph, 303 McDonald, Marietta.
Fowler, Mrs. Herbert, 1110 Cherokee, Marietta.
Gober, Mrs. W. M., 1109 Powder Springs, Marietta.
Griffin, Mrs. R. B., 504 Church, Marietta.
Hagood, Mrs. G. F., 710 Church, Marietta.
Hagood, Mrs. Murl, 826 Whitlock Ave., Marietta.
Lindley, Mrs. F. P., Powder Springs.
Mitchell, Mrs. W. C., 324 S. Atlanta, Smyrna.
McCall, Mrs. Moze, Seminole Drive, Acworth.
Perkinson, Mrs. W. H., 819 Church, Marietta.
Welch, Mrs. L. L., 1011 Church, Marietta.

GORDON COUNTY

President Mrs. W. D. Hall Calhoun

Members

Billings, Mrs. J. E., Calhoun.
Hall, Mrs. W. D., Calhoun.
Walters, Mrs. R. D., Calhoun.

EIGHTH DISTRICT

Manager—Mrs. W. M. Flanagan Waycross

WARE COUNTY

President—Mrs. Kenneth C. Walden Waycross

Members

Bradley, Mrs. D. M., 629 Nichols, Waycross.
Bussell, Mrs. R. B., Oneida, Waycross.
Collins, Mrs. Braswell, Cherokee Drive, Waycross.
DeLoach, Mrs. A. W., Cherokee Drive, Waycross.
Ferrell, Mrs. T. J., St. Mary's Drive, Waycross.
Flanagan, Mrs. W. M., 410 Remshart St., Waycross.
Folks, Mrs. W. M., Cherokee Drive, Waycross.
Hafford, Mrs. W. C., Riverside Drive, Waycross.
Johnson, Mrs. R. L., 509 Nichols St., Waycross.
McCullough, Mrs. Kenneth, Satilla Blvd., Waycross.
Minchew, Mrs. B. Harvey, 412 Williams St., Waycross.
Muecke, Mrs. Harold W., Richmond Ave., Waycross.
Penland, Mrs. J. E., 912 Elizabeth St., Waycross.
Pierce, Mrs. Lovick, 1003 Atlantic Ave., Waycross.
Pomeroy, Mrs. Loomis, St. Mary's Drive, Waycross.
Reavis, Mrs. W. F., Satilla Blvd., Waycross.
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Smith, Mrs. Leo, St. Mary's Drive, Waycross.
Stephens, Mrs. Charles, 312 Hill St., Waycross.
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Williams, Mrs. A. D., Lawrenceville.

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Burnett, Mrs. P. C., Alto.
Carter, Mrs. D. E., Cornelia.
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Garrison, Mrs. David H., Clarkesville.
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Hardman, Mrs. Charles T., Tallulah Falls.
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Lamb, Mrs. Erford H., Cornelia.
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Ayers, Mrs. S. E., Toccoa.
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Goss, Mrs. Ralph, Athens.
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Whelchel, Mrs. Guy, Athens.

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Battey, Mrs. Wm. Whatley, Jr., 2239 Kings Way, Augusta.
Bedingfield, Mrs. Wade R., 1134 Monte Sano Avenue, Augusta.
Bernard, Mrs. Guy T., 951 Meigs St., Augusta.
Briggs, Mrs. Alfred P., Colonial Court Apts., Augusta.
Burpee, Mrs. Claude M., 1127 Monte Sano Ave., Augusta.
Butler, Mrs. J. Harvey, 1103 Milledge Road, Augusta.
Chaney, Mrs. Ralph Hill, Bransford Rd., Forest Hills, Augusta.
Greenblatt, Mrs. Robt. B., 2233 Pickens, Road, Augusta.
Harper, Mrs. Harry T., Jr., 2739 Walton Way, Augusta.
Hitchcock, Mrs. J. P., Bransford Road, Forest Hills, Augusta.
Holmes, Mrs. Lysander P., 2810 Hillcrest Ave., Augusta.
Kelly, Mrs. G. Lombard, 2131 Gardner St., Augusta.
Lee, Mrs. F. Lansing, 901 Heard Ave., Augusta.
Leonard, Mrs. Robert E., 2814 Lombardy Court, Augusta.
Lewis, Mrs. S. Joseph, 807 Russell St., Augusta.
Matthews, Mrs. W. Eugene, 2735 Walton Way, Augusta.
McDaniel, Mrs. J. Z., 656 Georgia Ave., North Augusta.
McGahee, Mrs. Robt. C., 2817 Hillcrest, Ave., North Augusta.
Mealing, Mrs. Henry G., No. 3 Forest Ave., North Augusta.
Milligan, Mrs. King W., 942 Greene St., Augusta.
Mulherin, Mrs. Chas. M., Bransford Rd., Forest Hills, Augusta.
Philpot, Mrs. Wm. K., 2151 Kings Way, Augusta.
Phinizy, Mrs. Thos. B., 2350 McDowell St., Augusta.
Pund, Mrs. Edgar R., 1108 Glenn Ave., Augusta.
Rhodes, Mrs. Robert L., 2501 Belleview Ave., Augusta.
Sanderson, Mrs. Everett S., 2257 Oglethorpe Avenue, Augusta.
Sherman, Mrs. John H., 1122 Johns Road, Augusta.
Tessier, Mrs. Claude E., Buena Vista Dr., Forest Hills, Augusta.
Thompson, Mrs. Sadie Y., 1303 Monte Sano Avenue, Augusta.
Thurmond, Mrs. J. Wm., R. F. D. 3, North Augusta.
Todd, Mrs. Lucius N., Forest Hills, Augusta.
Torpin, Mrs. Richard, 2618 Walton Way, Augusta.
Traylor, Mrs. George A., 2311 Kings Way, Augusta.
Volpitto, Mrs. Perry P., 802 Monte Sano Ave., Augusta.
Williams, Mrs. Wm. J., Cardinal Drive, Forest Hills, Augusta.
Woodbury, Mrs. Robert A., 2817 Helen St., Augusta, Ga.
Wright, Mrs. Peter B., Forest Hills, Augusta.

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Mrs. C. K. Sharp, Arlington, Second District.
Mrs. Louis Smith, Lakeland, Second District.
Mrs. Lloyd Wood, Dalton, Seventh District.
Mrs. Louis R. Jelks, Reidsville, First District.

OBITUARY

(Continued from page 470)

two brothers. During his active career he was foremost in the introduction of many new drugs, x-ray, cesarean operations and physical therapy. The Harbins were in the front ranks, with keen vision in the field of both medicine and surgery. He was a member of the Floyd County Medical Society, Seventh District Medical Society, Southern Medical Association, American Medical Association, fellow of the American College of Surgeons, former member of the Board of Trustees of Shorter College, member and deacon of the First Baptist church. Surviving him are his widow, one daughter, Mrs. Warren M. Gilbert; three sons, Dr. William P. Harbin, Jr., and Dr. B. Lester Harbin, all of Rome; and Dr. Thomas S.

Harbin, resident physician at Grady Hospital, Atlanta. Dr. Bunyan Stephens officiated at the funeral services conducted at the First Baptist church. Burial was in Myrtle Hill cemetery.

Dr. Theodore Benjamin Davis, Newnan; College of Physicians and Surgeons, Baltimore, Maryland, 1881; aged 85; died on November 6, 1942, after a long illness. He was a prominent physician for 55 years in that section until he retired a few years ago. Surviving him are his widow, two daughters, Mrs. R. S. Mann and Mrs. Sarah Murphy, both of Newnan; three sons, W. J. Davis, Atlanta; Dr. B. B. Davis, Gainesville; and T. W. Davis, Newnan. Dr. L. O. Leavell, Rev. J. E. Hannah and Rev. W. A. Davis officiated at the funeral services held at the First Baptist church. Interment was in Oak Hill cemetery.

Dr. John Danner Thomson, Atlanta; member; Jefferson Medical College of Philadelphia, Philadelphia, Pa., 1904; aged 63; died on November 10, 1942, at a private hospital. He was born and reared in Atlanta and did his professional work in Atlanta, except while he served as captain in World War I. His private practice was limited to diseases of the eye, ear, nose and throat. His father was prominent in legal work and was a member of the law firm of Candler-Thomson. Surviving him are his widow, three brothers, and four sisters. Rev. Richard Orme Flinn officiated at the funeral services conducted at Spring Hill chapel. Burial was in Oakland cemetery.

Dr. Charles M. Mickle, Texas; University of Alabama School of Medicine, University, Alabama, 1894; aged 76; died on November 9, 1942, at his home. He was a native of Randolph County, Alabama. He was a prominent citizen and in addition to an extensive practice he was vice-president and a director in the Bank of Heard County. Dr. Mickle at one time was county commissioner, State Senator and a member of the Baptist church. Surviving him are one daughter, Mrs. W. C. Brannon; two sons, H. J. and J. T. Mickle. Rev. O. C. Fincher, Rev. C. M. Goforth and Rev. J. C. Adams officiated at the funeral services conducted at Prospect. Burial was in the church yard at Prospect.

Dr. Rufus Cecil Franklin, Swainsboro; member; University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, Md., 1907; aged 61; died on December 4, 1942, at a private hospital in Atlanta. He was a prominent physician and owner of the Franklin Hospital at Swainsboro which he built in 1916. After he graduated in medicine he took post-graduate study at the New York Polyclinic Medical School and Hospital, New York City, then in Paris, Rome and Vienna. He had served on the city council in Swainsboro, Board of Education and director of the Citizens' Bank. Dr. Franklin was a member of the Emanuel County Medical Society, Southern Medical Association, Southeastern Surgical Congress, American Medical Association and a member and elder in the Primitive Baptist Church. Surviving him are his widow and two daughters; Mrs. Paul Anderson, Atlanta, and Mrs. James Morgan, Swainsboro. Funeral services were held at the Swainsboro Primitive Baptist church.

IN MEMORIAM

JOHN DANNER THOMSON, M.D.

Dr. John Danner Thomson, of Bolton and Atlanta, died in Emory University Hospital, Atlanta, Nov. 10, 1942. The son of the late William S. Thomson, Atlanta attorney, and Nena (Danner) Thomson, he was born Dec. 4, 1879, at the corner of Peachtree Street and North Avenue, Atlanta, where the North Avenue Presbyterian Church now stands. He is survived by his wife; three brothers, W. D. Thomson, Albert D. Thomson and Logan Thomson; and four sisters. Miss Frances Thomson, Mrs. E. G. Booth, Miss Adelaide Thomson and Miss Mildred Thomson.

As a boy, Thomson attended Boys' High School in Atlanta. Later he attended old Emory College at Oxford, Ga., which he left in 1899 to pursue medical studies at Jefferson Medical College in Philadelphia, where he was granted his degree of Doctor of Medicine in 1904. He then spent sometime studying diseases of the eye, ear, nose and throat, which specialty he practiced in Atlanta for the remainder of his life, except for the time he served as a medical officer in the United States Army during World War I. During the first few years of his practice he was associated with the late Dr. W. E. Campbell of Atlanta.

Dr. Thomson early identified himself with organized medicine. He was a loyal member of the Fulton County Medical Society, the Medical Association of Georgia and national medical organizations. He never sought honors in any of these organizations, being content with the daily practice of his specialty and research in connection with the advancement of his work. He was known to his colleagues and patients as "Honest John"; indeed his life was best limned after his death by one of his friends, who said:

WHEREAS, the Fulton County Medical Society has lost in the passing of Dr. Thomson, a loyal friend and member, and our community and State have lost an excellent physician and a good citizen; therefore be it

RESOLVED, That we record in the proceedings of the Society this brief record of a full life well served, and that a copy be sent to Dr. Thomson's family with expression of our sympathy.

LEON E. BRAWNER,
HUGH M. LOKEY,
EDGAR D. SHANKS, *Chairman.*

BOOK REVIEW

Food Charts: Foods As Sources of the Dietary Essentials prepared by a joint committee of the Council on Foods and Nutrition of the American Medical Association and of the Food and Nutrition Board of the National Research Council. Paper. Price 10 cents (quantity prices on request). Pp. 20. American Medical Association, Chicago, 1942.

Current interest in nutrition is at a high level and the subject merits all the attention which it is receiving. Information about the composition of foods now is on a quantitative basis. A forceful presentation of some facts about foods as sources of the dietary essentials is provided by the present illustrated essay, which has been

prepared by a joint committee of the Council on Foods and Nutrition of the American Medical Association and of the Food and Nutrition Board of the National Research Council. There are eight charts showing the contribution that individual foods may make with respect to the needs for protein, calcium, iron, vitamin A, thiamine, riboflavin, nicotinic acid, and ascorbic acid. A feature of these graphic presentations is that the values are presented in terms of the proportion of the daily requirements which are supplied by typical servings of each food. The requirements selected are the Recommended Daily Allowances of the Food and Nutrition Board of the National Research Council. The charts show, for example, that a serving of about 3½ ounces of cooked greens (beet, kale, chard, mustard, spinach, turnip) will supply more than 10,000 International units of provitamin A, the daily allowance of which is 5,000 International units. An orange of average size, or half a grapefruit, or a serving of fresh strawberries will supply the 75 milligrams of ascorbic acid which is considered to be a desirable intake of vitamin C. It is interesting to note the unique value of milk as a source of calcium, protein and riboflavin. There is a descriptive paragraph or two about each of the charts. In addition the booklet reproduces the table of Recommended Dietary Allowances and also provides the values of Minimum Dietary Requirements.

EXIGENCY OF WAR

Oleum Percomorphum 50 per cent is now known as Oleum Percomorphum 50 per cent with Viosterol. The potency remains the same, namely, 60,000 vitamin A units and 8,500 vitamin D units per gram. It consists of the liver oils of percomorph fishes, viosterol, and fish liver oils, a source of vitamins A and D in which not less than 50 per cent of the vitamin content is derived from the liver oils of percomorph fishes (principally Xiphias gladius, Pneumatophorus diego, Thunnus thynnus, Stereolepsis gigas, and closely allied species).

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THE FAMILY PHYSICIAN

A page from the diary of the family physician: "Perhaps the thing that sets the doctor apart from his fellows more than any one thing is his constant stalking in the shadow of death. There is the elderly who has passed on life's highway the stone that marks the highest point; and being weary for the moment, lies down by the wayside, and using his burden for a pillow, falls into the dreamless sleep. Then there is the youngest, just in the happiest, sunniest hour of all the voyage, while eager winds are rushing every sail, to dash against the unseen rock and in an instant hear the billows roar above the sunken ship. His dealing with every life, no matter if its every hour is rich with love and every moment jeweled with a joy, will at its close, become to the doctor a tragedy as sad and deep and dark as can be woven in the warp and woof of mystery and death. It is the daily association with this constant spectre that lines his face with understanding, tolerance, and humor."—*Texas State Journal of Medicine.*

VITAMIN FILMS IN COLOR

During the past year the three 16-mm. silent motion pictures in color, describing certain vitamin deficiency diseases, which were made available by Eli Lilly and Company, Indianapolis, for showing before medical groups under sponsorship of a physician, have been in continuous demand. One film deals with deficiency of thiamine chloride (beriberi), another with nicotinic acid deficiency (pellagra), and the third with ariboflavinosis. To meet increasingly frequent demands for the films, additional new prints have been placed in circulation and are now ready for loan. The major part of all films concerns the clinical picture presented by the patient with reference to treatment by diet and specific medication. They do not contain advertising of any description, nor is the name of Eli Lilly and Company mentioned.

The films were made at the Nutrition Clinic of the University of Cincinnati at the Hillman Hospital, Birmingham, Alabama, where studies were initiated in 1935, under the joint auspices of the Department of Internal Medicine of the University of Cincinnati and the University Hospitals of Cleveland. Subsequently, these investigations became a co-operative project between the Departments of Medicine of the University of Cincinnati and the University of Alabama, and the Department of Preventive Medicine and Public Health of the University of Texas.

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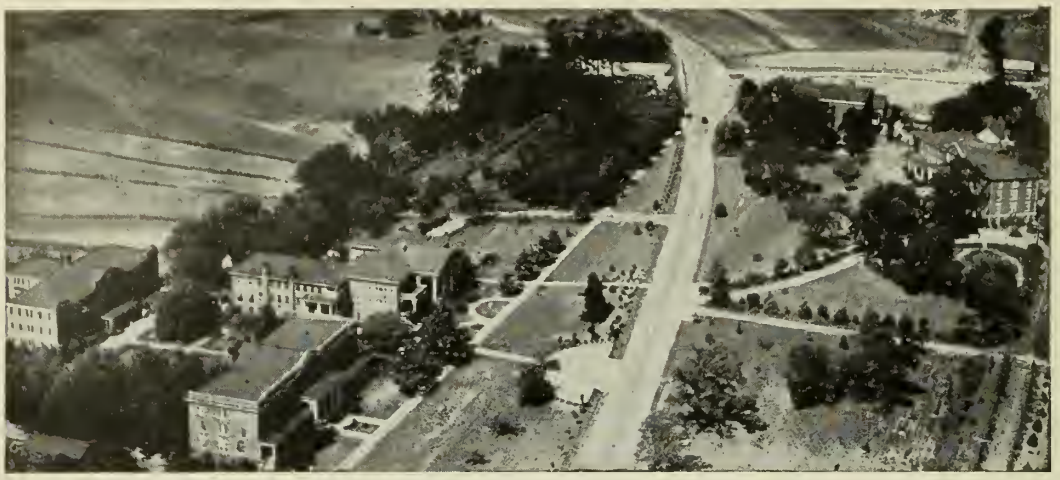
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